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HOW FAR TO THE NEAREST DOCTOR?

HOW FAR TO THE NEAREST DOCTOR?

STORIES OF MEDICAL MISSIONS
AROUND THE WORLD

BY EDWARD M. DODD, M.D.

Medical Secretary
of the Board of Foreign Missions of the
Presbyterian Church in the U. S. A.

New York
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TO

THE MEMORY OF MY FATHER

WILLIAM SCHAUFFLER DODD, M.D., F.A.C.S.

1860-1928

BELOVED PIONEER IN MEDICAL MISSIONS

IN THE NEAR EAST

FOREWORD

In this book the writer has tried to bring before American young people a living reality—the medical work of the Christian church in many lands. It has been no easy matter to temper genuine enthusiasm with professional restraint, nor to achieve in the story a dramatic vividness alongside the everyday, humdrum labors of doctors and nurses. Yet, in truth, all these elements make their contributions to a composite picture.

I wish to acknowledge my debt to many books and collections of letters which I have drawn upon—and especially to several books and pamphlets from which I have quoted. These are Dr. Paul Harrison's *The Arab at Home* (T. Y. Crowell Company); Mrs. Alice Pennell's life of her husband, *Pennell of the Afghan Frontier* (Fleming H. Revell Company); Dr. Albert Schweitzer's *Forest Hospital at Lambarene* (Henry Holt and Company); Mrs. Katharine Scherer Cronk's story *Three Knocks in the Night* (Women's Missionary Society of the United Lutheran Church); and Dr. Walter H. Judd's pamphlet *A Philosophy of Life That Works* (Student Volunteer Movement).

Particularly do I wish to express my gratitude to my medical friends and other gracious hosts who

shared with me their homes and their experience as I traveled around the world in 1930 and 1931 while making a study of this great phase of Christian missions. Finally I would express my sincere thanks for the cooperation of the committee and editorial staff of the Missionary Education Movement in preparing the manuscript for publication.

E. M. D.

Montclair, N. J.
March, 1933

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HOW FAR TO THE NEAREST DOCTOR?

Chapter One

WHY THEY COME

THE desert is the home of several millions of scattered people in western Asia and North Africa. The barren, inhospitable, boundless spaces are their world. Many desert dwellers, in Arabia, for example, never in their lifetime see a city, or any people but their own roving, fighting tribes. When they do leave the desert and visit a town, with its narrow streets closed in by high-walled houses and crowded with strangers, they are restless and uneasy until they can get back into the open. They are born, they live and they die in the picturesque black Bedouin tents, under the sun and the stars; and the little colts, which later become such splendid Arab horses, eat and sleep and play with the children in the tents. No wonder the Arab horse and the Arab rider are fast friends. And the camels—those queer, grotesque brutes, grunting and chewing their cuds outside the tents—are the Ford cars and trucks of the desert. Without the horse and the camel these people of the desert could never survive.

Life is hard for the nomads of the desert, even when things go well. When there is some misfortune, like sickness, it becomes doubly hard and often cruel and

tragic. There are no doctors or hospitals within easy reach. The nearest doctor may be days of arduous caravan journey across the burning wastes. The nearest hospital is likely to be a mission hospital in charge of a Christian doctor, and that also tends to discourage the desert Arabs from seeking help in that quarter, for they are strict Moslems who are taught to despise all non-Moslems, including Christians, as infidels. Good Moslems are not supposed to have anything to do with them. So it is both a hard physical adventure and a great personal adventure to go from the desert to such a hospital. Suppose, however, that out of dire necessity some Arab family decides to take one of its members to this hospital. Let us start across the desert with this family.

What a road that desert is! Blistering hot sand as far as the eye can see. A torrid sun in a steel-blue sky. Not a breath of air stirring. Nothing alive but the caravan. Nothing growing; no trees, no grass, to relieve the eye. Just that world of baking sand under foot stretching everywhere to the flat horizon, and furnace-like air overhead.

The camels—the godsend of the desert—swing on, one behind the other in the caravan. The riders doze in the heat. The camel drivers, who walk the sand, seem almost in a daze. But those Arabs know what they are about, and just where they are going. They know exactly the distance from one water-hole to another, and the amount and quality of the water available. If they didn't, it would be very easy to die. The

desert is no place for a stupid person. It is a case of wits and endurance against death all the way. When you are caravanning in the desert you simply have to make it to the next water hole; if you don't, you stay there on the sands for the vultures. Only the fittest survive, developing endurance and stamina.

Imagine a swarthy, desert-hardened, Wahabi father —one of the Arab tribes—bringing his sick little boy to a Christian hospital across the desert road and arriving at the gate of the hospital ground. The mother is brought along too. His language, as he addresses the gatekeeper, gives us the flowery idiom of the Arabs. And where there are no newspapers every traveler is expected to tell all the incidents of his journey.

"Open the gate, O gateman! Let in the sick and the weary ones. Praise be to Allah, we have arrived! Open the gate, I say. We would see the doctor, for I have brought my little son, lo these ten days, across the desert. And he is in pain, and the camel has gone lame, so that we came slowly. What a world! What a world! Ten days across the desert with Bin Hassan's caravan and much trouble on the way. My son's mother is also with us, and she must have a suitable place to rest. What a journey! What a journey! . . . Come, little son, mine heart! Mine eye! I will take thee down from the camel and lay thee down in the shade within the space where he now opens the gate. Allah forfend! We will take thee to the doctor and he will make thee well, as he did Bin Bilahid. Lo, Bin Bilahid is now as a lion.

And thou wilt be even as he, my heart. I will lay thee thus in the shade. . . .

"What is it thou sayest, O gatekeeper, that the doctor is busy and cannot see us now? It matters not. We will rest in the shade. *Bismillahi Rahmani Raheem!* We are here. And, please Allah, the doctor will come before evening and will care for my son. . . . What is it thou sayest, gateman? Thou canst get me to the doctor sooner if I give thee a rupee. Is it so? Then so be it. Here it is. We must see the doctor before tomorrow lest my little son have too much pain.

"What a journey! What a world! The tribe of Azman would have caught and slain us. May Allah destroy them! But we used cunning and traveled through their parts by night and so escaped them. *Lillah el hamd!* Thanks be to Allah! It was our *kismet* to escape them. Then we were without water at the last water hole but one. I might have known that that hole would have been dry this year, with the failing rains. But I hoped in Allah that it would have water. And we came to it. And it was dry. Then we must needs push on to the last one, all day—all day, and no water! But Allah brought us out, though the boy became sicker and the camel went lame. Show me where I can stable the camel. It is a good beast and brought us with the caravan, though lame. . . .

"We are Wahabis, as thou seest, and it is in our law that we should not come to the Christian infidel doctor. But Bin Bilahid, who is our great one, came to this doctor and was cured of much affliction.

Therefore, now it is lawful for the Wahabis to come thus. But in our village there was much talk about and about. And some would have prevented us. But my son was grievously sick and in pain. And Bin Bilahid had made it lawful And my son's mother cried out that they would kill our son by detaining us with talk of the law, even though Bin Bilahid had come. So I borrowed the camel of my uncle, for I am a poor man, Allah be my witness, and we came. . . . What is it thou sayest about money for the hospital? Before Allah we have only three rupees. The rest went by the way for food. If we had not shot a gazelle and caught a lizard we would have starved by now. We have nothing. The doctor will have mercy. Let him look upon my little son who suffers with the stone. And he will assuredly have mercy."

Many of the patients who come to Christian hospitals in Arabia or Iraq, Syria or Palestine or Egypt, travel across just such a desert as was traversed by this family. The desert is both their home and their highway. Here is what Dr. Paul Harrison of Arabia writes about the desert type:

The Arab is a splendid scout. His sight and hearing may be no better than ours, but his natural abilities together with lifelong training make the sand of the desert an open book. As the caravan marches along, the desert newspaper is read. "Ah, three days ago a flock of gazelles passed here";—"Here is the track of a wolf that was following them";—"This is the track of a *dhabb*"—the large lizard of the desert which the Arabs regard as a great delicacy.

However, their ability to read the language of the sand and plain goes far beyond such abc's as that. "Now what do you think of this?" announces one of the caravan's outriders. "Ibn Khalid's caravan passed along here four days ago. He had twelve camels with him and five men."

"Were they well loaded?"

"No, only three of them were loaded at all, and the loads were light. Two were carrying dates and the third rice."

"Yes, and his fine white camel, the one he bought a year ago from Ibn Ali for three hundred *riyals*, has gone lame."

Expressions of appreciative sympathy are heard from all the caravan. To the stupid Westerner the thing seems uncanny, and the Arab's effort to show how simple it is to read the book of the desert only increases his feeling of amazement. If someone could devise an alphabet in which *a* resembled a gazelle track, *b* that of a wolf, *c* that of a lame camel, the Arab would learn to read in a few hours!

It is from among such people as these, with their wild and rough life, but with their keen and sturdy qualities, that many patients come to mission hospitals in Asia. Having, as usual, put off the visit too long, they are more likely than not to arrive in an advanced stage of disease, and it is over such desert trails as this that Hassan, Mahmoud or Ali, who lives off somewhere across wide spaces, has to travel to get to the Christian hospital. He comes against his own beliefs, for a good Moslem should first try the concoctions of his regular *hakim* (doctor), or his priests

bind on his arm or hang around his neck the charms that they sell him. If he is in severe pain, you can dimly imagine what every lurch of the camel means, hour after hour, day after day. If he is burning with a fever, what suffering there is on those glaring sands, where water is as precious as gold! Then, when the patient reaches the end of such a journey and finds a kindly and skilful doctor and a comfortable hospital, you can imagine something of what it means to him, and how his ideas about Christians change. The most important thing of all is the spirit of the hospital.

Why does Hassan or Mahmoud or Ali come to the mission hospital? Why do any of the patients in India or China or Africa go to such hospitals?

Well, for one thing, they are in great need of medical attention, and often have no other doctors to whom to go.

Suppose we take the case of Hassan, son of Akbar, as an illustration from one part of the world. Hassan lives in a village high up in the mountains of Afghanistan. There are countless such villages in the East, huddled masses of little mud-walled, mud-roofed, mud-floored houses, each consisting of one room which opens into a stable for the cattle. Moreover, owing to the family feuds and the clan fights and raids, the Afghan house may have a little watch-tower with loopholes for rifles. In short, every home is a tiny fortress. Now Hassan falls sick with a fever. To him and to his family, fevers are just fevers—whether they happen to be malaria or typhoid or

whatnot. Anyway, here he is, hit by this fever which keeps coming back every other day. There is no doctor of any description in his village or in any of the surrounding villages; as far as Hassan or his family and their untraveled neighbors know, there are no doctors in that part of the world.

Hassan has a family of four children. Life in that poor Afghan village is a struggle from harvest to harvest. Hassan manages to work in the fields parts of two or three days a week. But most of the time he feels too wretched and weak to work. What is the family going to do for food if Hassan cannot work?

The family, squatting in a circle on the mud floor, goes into conference in the casual, lingering way they have, and ends up by sending to the next village for an old man who is something of a local herb doctor. When the *hakim* comes he concocts some sort of evil-tasting brew out of various plants, without any real knowledge of disease or medicine. He does the best he can for his patient. Hassan gets the concoction down and waits anxiously. So does the family. No results. The fever is back as usual. Meanwhile an uncle has called in the village *mullah,* the Moslem religious leader, in order to make sure that all available means are used. The *mullah* writes a charm in Arabic and ties it on Hassan's arm. Again the family waits. Still no results. The fever keeps returning. Hassan is losing weight and strength and getting discouraged.

Then one day a stray peddler, with his donkey pack of odds and ends, passes through, and in a chance con-

versation with Hassan's brother, tells of a foreign doctor in Meshed, across the border in Persia, who cured so-and-so of a fever like Hassan's. Moreover, he himself had had inflamed eyes which this doctor treated with ointment and cured. "You should see," the peddler continues, "the hundreds of patients going to that infidel hospital."

The family conclave gathers again to discuss this new idea. Meshed is a long way; but still people do go there in pilgrimages to the famous shrine of Iman Riza. It is a hard, trying journey, donkey-back; moreover, a good Moslem, like Hassan, has a strong prejudice against going to a Christian hospital. But he is obviously getting worse, and there is no help in sight. Finally Hassan takes things into his own hands.

"If I die, I die," he says with that yielding to *kismet,* or fate, that is common among Moslems. "If I stay here, assuredly I will die. If I go, it may be the mercy of Allah that I live. Let us go."

After many days of painful riding over rough mountain paths on the back of the slow-moving little donkey, Hassan arrives at the Meshed hospital. The kindly doctor promptly diagnoses his trouble as malaria and prescribes quinine. Within a few days Hassan is better. Presently the fever stops. His strength and hope revive. The doctor has him stay for treatment until his health is fully restored. When he finally leaves, he is singing the praises of the hospital. Wherever he goes for the rest of his life he tells about

his good friends at the Christian mission hospital and what they did for him.

So it runs—the chain of need, helplessness, then help; and the word-of-mouth spreading of the news about the place of help. People like Hassan come to mission hospitals because of dire need. Only there can they find the relief they require. This applies much more to certain parts of the world, Arabia and Afghanistan and most of Africa, for example, than it does to certain other parts where there are more doctors. Not by any means are all cases so simple or successful as Hassan's. Not everybody gets well. Nor is everybody who leaves a mission hospital a grateful patient. But, in the primitive and backward areas, there are so many experiences comparable to Hassan's that it is a fair sample.

Suppose we look at India, a country in which an enlightened government has been trying to do the best it can for the people through a great many years. What is the need there? It differs from Arabia or Afghanistan in that there are a great many doctors. But India is an enormous country, with a population nearly three times that of the United States. About nine-tenths of the people live in villages. The average village consists of about four hundred persons. If there were one qualified doctor for every three villages, there would have to be 250,000 doctors. But this is more than ten times as many qualified doctors as there are in the whole country.

The villages are really worse off than these figures might lead one to believe, because nearly all the doctors, in order to make a living, have to practise in the cities. The villages are too poor to support them. So the vast majority of the 750,000 villages of India have no doctor in them or near them. In other words, there are people enough to make up at least two countries, each with a population equal to that of the United States, who have no adequate supply of trained doctors.

A careful survey of health conditions made in India a few years ago shows what a terrible amount of sickness and death is caused by certain diseases. In the course of ten years there were over two million deaths from plague. In the same period there were over three million deaths from cholera. Fevers of all types caused in ten years over fifty million deaths. Malaria was the chief cause of these, and malaria is usually readily curable with quinine. In other words, while there is a huge total population of three hundred and fifty millions, yet there are millions of deaths from diseases that are not necessarily fatal and which medical science knows very well how to treat.

Nowadays the infant mortality in a country or city —that is, the death-rate of babies less than a year old —is considered the important test of its healthfulness. The average death-rate for the two largest cities of India, Bombay and Calcutta, is about four times that of New York. For six of the next largest cities the

record is even worse. All this is due to ignorance and poverty.

When we go on to look at China we discover that there are even fewer doctors for that huge population. The great mass of the people have access to nothing better than the treatment of an old-fashioned Chinese doctor. These so-called doctors are not scientifically trained at all. Their theories and medicines are mostly hand-me-downs of ancient superstitions. Such things as toad-skins and tiger's claws ground up into various mixtures are most popular. It is only fair to say that the old-style Chinese medicine, by hit-or-miss methods over centuries, has stumbled on a certain number of effective remedies. Some of the old-style Chinese doctors' medicines have value, but these are prescribed without any accurate idea of their proper use.

An acquaintance of mine tells of watching one of these Chinese doctors at work in his medicine stall on a market day, an occasion which, on a small scale, is something like a country fair. Out of the passing crowds that had come into this large village from surrounding hamlets, people suffering with various ailments would stop and enter the doctor's stall. First a farmer stepped up and asked for some medicine for a swelling on his chest. The doctor took out a rusty needle and stuck it into the swelling, "to let out the air." Then he clapped onto it a dirty black plaster. Next a man came along with a toothache. He thought there was a worm in his tooth—the popular notion

about the cause of toothaches. The doctor poked around with an old rusty piece of wire, and by some sleight-of-hand produced from somewhere a wriggling worm! This satisfied the man for the moment. But I wonder about the toothache. Another man pushed through the crowd and asked for some medicine for his baby son at home who "is hot and won't eat." Of course the doctor had never seen the child. "Sell me a good medicine," said the man, "one of those which contains twice seven ingredients and costs sixty coppers." That was his idea of a good medicine—as many ingredients as possible, and expensive! I pity the small baby at home.

Well, that gives us a glimpse of what millions of Chinese get in the way of supposed medical treatment, if they get anything. Does not that indicate a need for competent doctors who are honest and who care?

And that leads us to another reason why so many people in such countries as China and India and Arabia come to mission hospitals. It is because of the kindnesses they find there. Mission hospitals are usually small and perhaps not very well equipped in comparison with modern city hospitals in Western countries. There are, of course, fine large hospitals in many parts of Asia and Africa, but these are found chiefly in the important towns and cities. The point we are making here is that regardless of its size or equipment the people know that they can expect hon-

est and equal treatment, friendliness and kindliness, at a Christian hospital.

I often recall the many wards in the sixty-six mission hospitals I visited when traveling around the world in 1930-31, wards which radiated good cheer and good will. Most of the poor, down-trodden village people, who are the patients to be found in them, have never before had such experience of care as is given them here. I picture to myself the children's ward at a hospital in Hwai Yuan, China. Skilful surgical and medical work is done there, but what impressed me even more was the atmosphere, the spirit, of that cheerful ward, where every bed was taken. Dr. Agnes Murdock and her sister Miss Margaret Murdock, the doctor and nurse respectively, told me how children respond to the happy feeling in the ward. Some children are at first unhappy or contrary or fearful, but within a day or two they invariably swing right in with the cooperative friendly ways of the place. The doctor and nurse attributed this chiefly to the splendid Chinese nurse in charge of the ward. My guess is that they all helped to create that spirit.

Some years ago I was in medical missionary work in Persia. One cold afternoon in autumn my gatekeeper came to my door to announce a patient. One of the crude, solid-wheeled, unlubricated Persian oxcarts had just shrilled and groaned its way to our hospital gate, carrying the patient.

"Doctor Sa'ab," said the gatekeeper, using the familiar expression, "there is a sick one."

I went over to the hospital. It was dusk, so I could not see clearly down to the other end of the long hall. All I could make out was a curious shapeless mass tottering toward me. As it came nearer I saw that it was an old man carrying a boy on his back. We guided them into the examining room, for the boy was evidently very sick. I soon found that he was a good deal sicker than one likes to see. He seemed almost in a dying condition.

The old man who carried him was his father. They had come a long way on the ox-cart—two or three days' journey I think—because there was nowhere else to go to but our hospital. The father, who was a very poor and ignorant village man, began to tell me the story.

"He and the other boys were out on the hills with the flock from our village. It was very cold, an early snow fell, and the boys could not get back that night. Before we found him, his feet were frozen and he could not walk. We knew not what to do. One said this and one said that. And one said that we should bring him up to the Meriz Khana [House of the Sick] at Tabriz. They showed us the road and we came."

His eyes followed me with dumb questioning as I examined the poor boy. Then he went on, "Praise be to Allah! We are now here. Can you cure him?" The mother of the sick boy, who had come in behind them,

now crept up to the table and murmured, "May Allah bless you. Save our boy!"

There was not much examination necessary to show that he was in a serious condition. His feet were far gone with gangrene; in fact they were literally at the point of dropping off. It required almost no surgery and no anesthetic to remove the feet and bandage up the stumps. The main thing was to get him to bed and do all we could to keep up his strength.

He was made comfortable in a clean bed, the first of the sort he had ever been in, and was soon warm and at rest after his hard trip. His old father and mother —simple village folk of few words—sat on the floor by his side. When I made my late evening rounds, there they were, bowed over the bed, comforting him in their own fashion and doing what little they could for him. He was very low.

During the night he slipped silently away. The father and mother sat quietly weeping. I felt as if I could sit down and join them. It is a very grievous thing to lose a son in Persia. And I think he was all they had. But the touching part was to see how grateful they were to us. In their ignorance and grief they could say but little, but they felt more than they could say. Their boy had died. But his last hours had been spent in comfort and warmth and amidst kindness. With tears streaming down their faces they said over and over again their simple thanks, "May Allah reward you," "May Allah give you long life!"

Still another reason why people come to the Christion hospitals is because they want to be honestly dealt with. How often have patients said to those of us who have been in mission medical work, "We came to you because we know you will tell us the truth. Our doctors promise us this and that. And we cannot trust them. But we know you people tell the truth."

I often think that the clear telling of the truth day by day in the Christian hospitals is one of the strongest practical demonstrations of what we are trying to share with the people around us. There is often so much of lying and falsehood in their background, in contrast to Christ's life and teaching and all the best heritage that has come down to us. In the Mohammedan traditions, for example, Mohammed is quoted as saying: "Verily a lie is justifiable in three cases: in war, to women, and to reconcile friends." Not that all Americans are truthful and all Asiatic people are not! Far from it. But Christian teaching and influence is consistent in emphasizing honesty and truth telling, whereas the religions and traditions of some of the people the Christian doctor meets are not. It would be easy to give many examples of this from various countries, but here I can give just one out of my own experience in a Moslem country.

During the World War many of us in the Near East did relief work for the refugees of all races and countries. It happened that I was in charge of one piece of relief work in the Persian town of Dilman,

in which region we had ten or twelve thousand people of four different nationalities to care for in one way or another. One of these groups consisted of refugee Kurds from the hills, the very people who had been proud and cruel marauders a year or two before. They were a picturesque and independent people composed of various hill tribes. The war had finally devastated them, too. Ragged and sick and starving, they were flocking down onto the Persian plains where they heard that relief from America was to be had.

One need we had to meet was that for warm covering against the cold, and we tried to provide them with quilts. These, incidentally, had been made by other refugees as a means of earning money. It was a raw, bitterly cold day; our courtyard was filled with forlorn, half-clothed, shivering Kurdish women to whom we were giving quilts. But the people had been arriving too fast for our stock of quilts, and it soon gave out. It was then my unwelcome task to step out and announce to them most regretfully that we had no more quilts at the time but would have some as soon as possible.

They wouldn't believe me. They thought I was withholding something from them—as their own great and powerful chiefs might do. I repeated and explained, but still they begged and implored me to give them the quilts that they thought I must have. In their dire need they tore their hair, tossed their

arms, and in their Oriental manner threw themselves on the ground before me, crying out that they must have quilts. Didn't I see how forlorn they were? Allah was their witness that they needed coverings! Wouldn't I produce the quilts? A small pandemonium broke loose in that courtyard.

Just then a Persian of the town who knew our Christian medical work by reputation, though a stranger to me, came along and saw what was going on. He stepped into the hubbub and cried to the women to be still a moment. Then he said, "Why do you keep troubling the Doctor Sahib? He says he has no more quilts now. Therefore, he has none. It is the truth. When these people speak, they speak the truth. They are not like us!"

There he was, a Moslem speaking to fellow-Moslems, and in one breath making a striking admission and paying a notable tribute. They accepted what he said and became quiet. The incident was very valuable to me in what it taught me of the way the people recognized our standard of truthfulness. Such a popular reputation places a constant responsibility on all who work in the name of Christ.

We have been thinking here of the reasons why people in various parts of the world seek out the Christian hospitals, and we have had some glimpses of these sufferers on their long journeys to the nearest doctor. Suppose we turn now to look more closely at the life and work of some of these hospitals and their staffs of doctors and nurses. Let us see how they

take care of the people who come to them in such need. We may well begin by acquainting ourselves with a few of the men and women who have pushed out into some of the frontier areas of the world to do pioneer work under pioneer conditions. How do such doctors tackle their job? What has been their influence?

Chapter Two

FRONTIER TRAILS

HOW many of us know Walt Whitman's stirring poem of the days when our "resistless, restless race" was developing the West?

Down the edges, thro' the passes, up the mountains steep,
Conquering, holding, daring, venturing as we go the unknown ways,
Pioneers! O Pioneers!

This spirit of daring and discovery has been characteristic of many medical missionaries. Livingstone, the famous explorer of Africa, was a medical missionary. But the spirit of Livingstone and other pioneer Christian doctors in Asia and Africa was that of exploration and pioneering for the sake of people—not just to open new country, valuable though that may be.

This spirit has taken them across deserts, through the perils of forests, and over forbidding mountain ranges. It has brought them into contact with all sorts of people beyond the frontiers—semi-civilized or savage—whom they could serve.

One of these forbidding mountain regions, which is a constant challenge to the pioneer spirit, is on the

northwest frontier of India. As one passes out of India in the direction of Afghanistan, there is a rough border country, which is a sort of "No Man's Land." It is neither under Afghanistan nor under the British government of India. The inhabitants are wild, untamed, Moslem tribesmen, called Pathans. Nature is unkind to the Pathans. In winter, up in their rocky hills, they suffer from snow and intense cold; in summer they are scorched with heat. They have to be a hardy, tough race to survive. In the short spring they manage to raise a little grain; and they pasture meager flocks on the scanty pasturage of those hills. But their envious eyes are ever on the fertile plains of India, stretching away southward from the hills—to the countless villages and towns, where the daring and skillful may loot or kidnap for ransom. So they do a good deal of marauding from their mountain fastnesses. And the nearby plains people, who are not such fighters, live in constant dread of them.

You can sense something of all this when you see Pathans going about on business in India. Many of them, contrary to Moslem teaching, are professional money lenders. Always going two and two, they ply their trade of lending money—and collecting. They are rather strong and effective on the latter. When you see two burly Pathans, with their big turbans, full belts, loose trousers and brass-bound sticks in the streets of an Indian village, you notice how they swagger along and how the rest of the people give them plenty of elbow room.

It was on this frontier of India that Dr. Theodore Pennell of England went to work. And it was from his border hospital at Bannu that he rode on many errands of help into the Pathan country. One day there came a call to see one of the outlaw chiefs—Chikki by name. His friends told Dr. Pennell it was too dangerous. They said that Chikki—the old reprobate—was just appealing to him with a fake illness so as to rob or kidnap or kill him. Everyone knew Chikki. His name was all too familiar in every bazaar and every caravanserai of the frontier. He was one of the worst bandit chiefs of the whole border, and to him treacherous raids and kidnapping and assorted murder were all in the day's run. If one had the ill luck to meet up with his rampageous outfit, it was just one's *kismet*; but to go and deliberately put your head in his hand by venturing into his village stronghold was unthinkable foolishness. Here he was, asking the foreign doctor to believe his fine tale of sickness and to come to see him. Allah forbid! By the beard of the Prophet, what a ruse! Surely the Doctor Sahib would not go!

But Dr. Pennell insisted that he would go. Yes, he was going to take Chikki at his word, as a man in need. After all, this was just the sort of thing for which Dr. Pennell had come out from England to the northwest frontier of India. If you tried to help these Pathans and Afghans, risks were part of the game. It was not armchair country, round about Bannu where his hospital was located, but rugged, mountainous waste where wild, lawless people lived by their

rifles or knives and their wits. You had to take it or leave it.

So off they started on horseback, Dr. Pennell and Chikki's fierce Pathan men. The first stage had to be covered swiftly because the spring floods were due down a river which they had to cross. If they didn't get to the ford first, they would be delayed for days. So in the last lap they had to spur their horses into full gallop and make a dash for it. They made it. But, just after they had splashed and clattered through, the foaming waters came down, making the river impassable. The last stage led through a steep gorge flanked by great cliffs. As they turned a sharp corner, the leading Pathan grunted and pointed upward:

"Chimarak."

High up and ahead bristled a rough fortification—Chikki's stronghold. The approach to it had to be made in single file. Half a dozen men could defend it against hundreds. Higher and higher the party climbed. Then they were at the big gate. The turbans of Chikki's men showed over the walls. The gate was thrown open and promptly closed behind them. Inside they were at the complete mercy of a murderous outlaw. Dr. Pennell was all eyes, with curiosity and interest.

Chikki, the famous outlaw, short and black-bearded and swaggering in manner, armed with revolver, long knife and rifle, was before him. They looked at each

other with keen interest, and the outlaw chief gave the conventional Moslem greeting.

"Allah be with thee."

"And with you, my friend," replied Dr. Pennell.

"Didst thou not fear to come?" asked Chikki, with a grim smile.

"Am I not thy guest?" was Dr. Pennell's cool and skillful reply. The law of safety in hospitality is recognized even among such people.

His host promptly did the honors. Seats were brought out and covered with rugs. A sheep roasted whole, savory dishes and tea were brought on. And the party, hungry from the long ride, fell to.

When they had finished, Pennell asked how he could serve Chikki.

"One of my men is wounded. It was an accident in the hills—a shooting affair," said the chief. Pennell could readily guess the nature of the "accident" but he showed no sign of questioning.

"Let me see him," he said.

Chikki led the way through the huts of the village to where the injured man lay. The doctor dressed the wound and gave the man a cooling drink. He had fever; and it is quite likely that the Pathans had the idea, which is so common among Oriental people, that you shouldn't give water to a person with fever.

When Chikki led the way back to his own courtyard, he made a curious remark.

"I have heard, Sahib," he said, "that you are a

preacher of the *Injil* (gospel), and I wish to hear thee, that I may judge of the merits of our religions."

This is one of the surprising characteristics of many people that the missionary meets—they are so often ready to talk about religion, even when, according to our notions, they would hardly be called religious people. But Chikki's request gave the Christian doctor a great chance to tell these strong, lawless men what he considered the most vital and precious part of life. Few missionaries have had such an audience. Most of them were presumably outlaws who would kill a man on the least impulse.

Chikki may have thought that Dr. Pennell had some doubt about his own safety, for he said:

"Do not be alarmed about these fellows. They may all be rascals, but I have my rifle here, and if anyone molests you, I will send a bullet through him."

The next day, after seeing the wounded man and other patients, and assuring Chikki that the man would recover, Dr. Pennell prepared to leave. Chikki hated to see him go, and kept him in a long and serious conversation on religious matters. According to his lights, Chikki was a good Moslem. He observed the regular forms of prayer five times daily. When he killed someone, he made an extra prayer. He had a special prayer for his aim when he was sighting his rifle on a victim. "The prayer is always accepted by Allah!" he explained to the missionary.

Dr. Pennell left with him some copies of the New Testament and rode away. He never saw Chikki

again. But interestingly enough, Chikki gave up some of his lawless habits, perhaps as a result of Dr. Pennell's influence or of reading the Testament. Later, when a Moslem holy war was declared by the Afghans against the British, Chikki would not let his tribe join in.

The physician's right hand man, Jahan Khan, was won in a similar friendly way. Although Jahan Khan had been very much opposed at first, he gradually responded and finally became a splendid Christian and an immense help in mission medical work.

Dr. Pennell took every opportunity for serious, friendly talks with the people for whom he worked. He had not left his English home only to help people physically. That was, of course, very much worth while in itself. But the purpose for which he gave up home and England and went out to such a dangerous and unpromising border country was larger and deeper. He had a dream of bringing a new life to people, a life which meant catching something from the deeds and words of Christ. Here he was doing some of the deeds of Christ; and he also constantly longed to share the words of Christ. He wanted the people to know why he had come to live among them. Many a time on his village calls he and the local *mullahs* would get into warm discussions. The *mullahs* were, of course, opposed to him because he did not believe in Islam, the Moslems' religion, and because they did not believe in the Christian religion. They

were, moreover, undoubtedly jealous of his power to help the sick and of his influence.

The Pathans, as we have said, are freebooters and marauders of the frontier, fighting each other in family or clan feuds. Yet they are upstanding, virile, interesting people. Dr. Pennell loved them with all their faults, and devoted himself to them. His frontier hospital at Bannu came to be known all up and down the turbulent border. Many were the strange, tragic and pathetic cases that found their way there.

One day a wounded Pathan, who had been shot in a family feud while going home from evening prayer at the mosque, was brought to the hospital in a serious condition. For days it was uncertain whether he would pull through or not. Two brothers took constant care of him. They were all sure that he had been shot by an uncle with whom they had had a quarrel over some family property. Gradually the man got better. One day he showed more vigor and said to Dr. Pennell that he had a request to make. Dr. Pennell, always eager to help, bent over him.

"Sahib, I want you to get me some cartridges; here is the money."

"What for?" asked the doctor.

Then the man, who had barely escaped death, explained that he wanted cartridges so that he could go home and get his revenge. Dr. Pennell refused, and tried to reason him into a better attitude of mind, but with no success. The violent eye-for-an-eye code of border life was too strongly in the blood.

Half humorously, Dr. Pennell finally remarked:

"Well, I suppose we shall have your uncle here as a wounded patient in a few days, and shall have to take the same trouble over him."

"Don't be afraid of that, Sahib," was the comforting reply; "I am a better shot than he is!"

Dr. Pennell traveled about the country a great deal, for he felt that in camp and village life one comes into closest touch with the people. When he reached a village, the news of the arrival of the famous doctor sahib would be spread around quickly. And the caravanserai or guest-house would presently be crowded with patients. Often there would be an opportunity to correct some mistaken idea. For example, he discovered that the reason a large number of the people were strenuously objecting to the British government's free vaccination against smallpox was a widespread belief that the foreigners were looking for a girl to sacrifice in England, and that they would recognize the right girl when milk instead of blood flowed from the arm scratched for vaccination.

The Pathans and Afghans of the border are difficult people to deal with, not only because of their violent and lawless ways, but because of their trickery and thieving. On one occasion some tribesmen brought in a patient and went away with profuse thanks. They took careful note, however, of the hospital grounds and of the hospital tent which did duty as part of the equipment. During the night they came back and cut away and carried off half of the tent.

The next night, expecting a return visitation for the rest of the tent, guards were posted. In the night a disturbance was raised in a distant part of the grounds, and the guards were fooled into running off to see what it was. At that moment the thieves quietly slipped in behind them and carried off the rest of the tent. When Dr. Pennell heard of it, instead of being furious he roared with laughter over the cleverness of the thieves. It was a mean bit of thievery, when the doctor had taken the friend of the thieves into the hospital for treatment, but his sense of humor came out on top.

Dr. Pennell was under no illusions about the dangers he ran. In addition to a host of friends and grateful well-wishers there were plenty of utterly unscrupulous outlaws around, who did not know him or who were too casual in their murders to care about whom they killed. He wisely made a point of going unarmed. Not only would he prefer to be shot than to shoot anyone else, but he also knew that any arms he carried would be a tremendous temptation to border freebooters. Killing a man for a good revolver or rifle was quite in order and considered good business.

His frequent danger was once illustrated when he was off on a trip alone. At a turn in the road he came upon a *mullah,* who knew him, and two other men talking earnestly together in low tones. He stopped to speak with them. Presently the two men demanded a favor of him on the ground that they had saved his

life. They explained that as he came along they had been debating whether to kill him or not, and had finally decided not to do so; therefore they claimed a reward! The *mullah* had argued that since Dr. Pennell was an infidel, it would be a sure way to attain Paradise if they killed him. The counter argument had been that he was working for the good of their people, so that it was not lawful for them to take his life.

Such incidents did not intimidate Dr. Pennell in the least. He came and went fearlessly, wherever and whenever needed.

The faith in his power to cure was often pathetic and was particularly true of the blind, since eye troubles are most frequent in these barren mountains and deserts. Many hopeless cases were brought to him. They went to his heart because nothing could be done for them. But it would often be hard to convince these blind people that this was the truth. "O Sahib, just a little light! Only a little sight," they would implore. "We have come all these days' journey because they said you could cure everything!"

Then, in the midst of his great service, Dr. Pennell was cut off. An infection, caught from a patient on whom he had performed an operation, laid him low. When word went out that he was critically ill, the whole community was moved as it had never been moved before. From the whole border region, where human life is cheaply held, people flocked to the hospital where their beloved friend lay sick. They

crowded about, asking for word of him and hanging upon every report that came out from the sick room. Normal life in the town of Bannu came to a standstill. These Moslem people prayed for his recovery.

Meanwhile, Dr. Pennell was cheerfully courageous. His friend and faithful helper, Jahan Khan, with other friends, came in the evening and prayed with him. But, little by little, his strength ebbed and then failed. When the word of his death came out to the huge, waiting throngs a great sob seemed to go through them; and they abandoned themselves to grief. It seemed as though everyone in Bannu was stricken; as though he or she had lost a dear, personal friend.

They asked to see him once more as he lay serenely still. So they were allowed to file past him for several hours. It was an impressive sight—fierce, rugged warriors from across the frontier, beggars in rags, officers and soldiers of the British government, women with children, shopkeepers, villagers, the high and the low, Hindus, Mohammedans, Christian converts, ex-patients and their friends—hour after hour they filed silently by, with streaming eyes taking their one last glimpse of the beloved doctor sahib.

They could not believe that he was dead. "Our beloved Sahib could not die," they said; "he lives." In a different sense they spoke the truth. Their doctor sahib lives in their memories and hearts, and his story will be handed down from one generation to another.

Such was the impression made by one great pioneer doctor.

With different people and a different setting there have been many other courageous and pioneering spirits. I should like to give you a glimpse of one more, from the country of Siam. Siam has been known as the land of the white elephants (which are not really white, but grey), and for the Siamese twins (which really were not Siamese but Chinese). So apparently what little we know about Siam is likely to be wrong! The country is largely composed of jungle or forest, and in general presents a green and rich-looking landscape as one travels through it. The people are easygoing and friendly, and seem to have enough to eat.

The Siamese still use elephants for lumber handling and other kinds of heavy work, though not to the same extent as formerly. Readers who have seen the famous movie of jungle life called "Chang," which was filmed in Siam—and partly in a medical mission station, strange to say—will remember the wonderful elephant scenes, and how much the people seem to depend upon elephants. It is interesting to observe, by the way, that the animals used in that motion picture were work elephants, hired from a lumber company and made to act like wild ones. The story goes that when those elephants got through doing their rampaging movie "stuff" and were put back on the job, they wouldn't work at first. They had

had too thrilling a time crashing houses and running wild generally—"too much Hollywood"—to be willing to go back to the humdrum hauling and piling of logs. It took a little time and firmness to discipline them once more.

Though elephants are "going out" and automobiles are gradually "coming in," the vast majority of the people still live in very simple fashion in small, primitive villages. There is only one sizeable city, the capital, Bangkok. This is a large, beautiful and partly modern city, with some fine buildings—the impressive palace of the king and two or three quite modern hospitals. But most of the country has nothing at all equal to this. In general, outside Bangkok, the Siamese have no better medical facilities than are to be found among the rural population of China or Persia.

In 1931, when the king of Siam came to America for an operation on his eyes, we read a good deal about Siam. Being a quiet little tropical country, tucked away between Burma and Indo-China, it does not often appear in the headlines of our newspapers. Today Siam is making great progress from a sort of primitive jungle village toward modern conditions. Its principal railroad is one of the most comfortable I ever traveled on. The people and the government have been unusually friendly toward those who have gone there in Christian work. Christian hospitals have been given substantial help by the government.

But when Dr. James McKean went to Siam about forty years ago it took longer to go from Bangkok, the capital, up to his station of Chiengmai, in the north of Siam, than it did to go from San Francisco all the way across the Pacific Ocean to Bangkok. He was telling me about it the other day in my office, when I asked him about his early experiences. The voyage from San Francisco to Bangkok took thirty-seven days, and the journey from Bangkok to Chiengmai took fifty-seven days. When I went up from Bangkok to Chiengmai in 1931 it was a very comfortable train ride of about thirty-six hours.

In those days travelers had to go up country by river boat. And they had to wait for the special kind of Chiengmai river boats to come down stream, as other boats couldn't make it. There were some forty rapids to navigate on the way up. Four or five men poled each boat. Sometimes, in particularly bad places, the boats had to be unloaded to get through, and the loads were carried laboriously along the bank.

Though Dr. McKean was not the first medical man to go to Chiengmai, the conditions were about as primitive as if he had been. There was a small native-style building of bamboo for a dispensary, with two small so-called wards. Operations were done on the veranda, in the sight of the passers-by in the street. There was no dearth of patients; the difficulty was to handle all who came.

On his medical trips Dr. McKean sometimes used elephants. There was a good deal of rough going, up hill and down dale. The elephants were good at this. There was one such elephant-back journey of forty days. One of the missionaries, Dr. McGilvary, had an elephant of his own which was very useful and very intelligent. Dr. McKean tells of how they used to have breakfast in camp, and how the elephant would come and stand at Dr. McGilvary's shoulder while they were eating and be fed with pancakes out of Dr. McGilvary's hand.

Once an elephant got a bad abscess on his back, caused by the rubbing of the *howdah* in which the passenger rides. It wasn't exactly the sort of case that his medical professors had taught the young Dr. McKean to treat. But there he was with a new job for a medical missionary! They made the elephant lie down. Then Dr. McKean opened the abscess, and the pus drained away well. After that he would give it a daily washing with an antiseptic solution, using a garden hose for the purpose! The elephant squealed and made a fuss the first time, but was so relieved that thereafter it obeyed and submitted in the most docile fashion, evidently realizing that the treatment helped.

Dr. McKean was so highly esteemed in Siam that, after a time, he was made private physician of Intanon, king of the northern part of Siam. There is just one king for all of Siam now, but less than forty years ago there was a king in the south and a lesser king in the north.

In Siam lepers were once neglected. They used to be outcastes until Christian doctors came. Nobody wanted them around. If they came near other people, they would be asked in no mistakable fashion to move on. Their own people would not lift a finger for them. This was not because the Siamese people are hard-hearted. Quite the contrary. They are naturally kind —as kind as any people in the world. But their religion, Buddhism, teaches them that suffering is a sort of paying up for evil done in some previous existence. It teaches that each soul is reborn into life many times. Thus if a person sins in one of these lives, he is punished for it in another. So the lepers, according to this view, were people who were being punished for what they had done in some earlier existence. Therefore they must go through with the punishment; it would be interfering with divine law to help them out. They should be allowed to suffer and do penance for the past. Compare this with what Christ teaches about suffering people, and with what he did for lepers.

Dr. McKean, like many another medical missionary, was deeply stirred by the suffering and hopelessness of the lepers. He asked the government for some land on which to build a place of refuge for them. He was granted a large island in the river at Chiengmai. The island had been the domicile of a crabbed old royal elephant. When the elephant died, the island was turned over to Dr. McKean without any-

body's thinking very much about it. Nobody wanted the island particularly, and certainly no one wanted lepers near by. And if Dr. McKean wanted to put some lepers out there and care for them, all right. But nobody imagined what was going to be created on that beautiful jungle island.

Those were the days before medical science had discovered a real treatment for leprosy. Leper asylums were just places of refuge—human scrap heaps—where the human wrecks could be kindly taken care of until they died. It was a work of love, but it was a work without hope of cure. Nowadays the doctors know how to deal with leprosy in its early stages, and patients can be virtually cured and sent back to their homes and friends to live normal, useful lives. Even cases in later stages can be helped more or less. The treatment consists of injections of chaulmoogra oil, which is obtained from the fruit of a tree found in parts of India, Burma and Siam, and which has now been introduced to Hawaii and South America. It takes many months, or even years, of steady treatment to effect a cure. But it is worth it.

So Dr. McKean's asylum was started as just a place where these wretched people could go and live in peace and have food and shelter. Two or three tiny huts were built—just large enough for a person to crawl into and secure shelter from the rain and cold. People with leprosy suffer badly from the cold. So even a tiny hut and a blanket meant wonderful com-

fort for them, after the knocking around from pillar to post to which they had been accustomed.

From these first crude little huts there has grown, year by year, a beautiful, well-planned village, which I visited not long ago. It is one of the most wonderful places I have ever seen. Instead of two or three cramped huts, there are rows of neat little cottages, a beautiful chapel building, a clinic, a hospital, an office building, and a handsome, though simple, recreation building. They dedicated this last building while we were there. This village for leper people now has four hundred inhabitants. They have their own organization—a mayor, village elders forming a sort of town council, a school, a police force, and a sanitary squad. They have a carpenter, a blacksmith, a tailor, and a painter and other artisans. The boys have a lively band, which played at the dedication exercises of the recreation building.

There are probably as many as twenty thousand lepers in Siam, which has a population of about thirteen millions. About fourteen hundred of these twenty thousand have passed through the leper village at Chiengmai. In many parts of the world there are leper hospitals carrying on similar work. The agency through which much of this great service of mercy is directed is the Mission to Lepers to which thousands of Christian people of all churches in the United States and the British Empire contribute.

The spirit in that Chiengmai village is remarkable. These lepers have caught the ideal of Christian broth-

erhood, and out of their small allowance of goods and money, are constantly praying for and making gifts to others who are worse off than they are, not only in Siam but also in distant parts of the world.

The key to Dr. McKean's inspiration lies in something he is fond of quoting: "God had one son. And this son was a physician."

Chapter Three

WITCH DOCTORS *vs.* CHRISTIAN DOCTORS

DAVID LIVINGSTONE, who was a great missionary doctor as well as a great explorer, was the forerunner of the brave men and women who have, at the risk of health and life, slowly extended our knowledge of Africa. Penetrating her forests, crossing her deserts, they have sent back information about her great natural wonders, her animal life, and especially about her peoples, their beliefs, manners and customs, until Africa has come to be a never-ending source of interest to the rest of the world.

In recent years daring aviators have criss-crossed the Dark Continent in long-distance non-stop flights, and today only small portions remain to be explored. But that is only a preliminary survey. The great work of reaching the people has only begun. In this chapter we shall follow a section of that small, devoted army, the missionary doctors, who are carrying on the Livingstone tradition of Christian helpfulness on behalf of the vast, scattered populations of Africa's forests and grasslands.

If you were a doctor and suddenly found yourself put down in Africa to help her primitive, superstitious people, how would you begin? How would you

take hold of things and go to work? One way would be to find what the special needs of the people are, and then, in a spirit of sincere friendliness, try to meet them. One of the greatest needs of the African is to be freed from the awful power of the witch doctors who terrify him and impose on him cruelly. To give the African people the truth about the causes of disease and death, to free their simple minds of superstitious fears, is to bring them help where they need it most.

The witch doctor is the African's medicine man. He is supposed to know all there is to know about disease, its cause, prevention, and cure. His idea of cause is chiefly that of evil spirits which have been coaxed by some enemy to enter the sick person. The way, therefore, to help the sick person is to punish the guilty enemy. The witch doctor has his impressive way of discovering this enemy by a ceremonial process of "smelling him out." This really means that the witch doctor picks out and accuses anyone he pleases. And, usually, everyone believes him. They are afraid to question his authority, since he was elevated to this position by the chief of their tribe. When "smelled out" the accused person is cruelly punished—probably tortured—perhaps killed.

Now just imagine yourself, if you can, as an African in one of the villages far off in the forest. A man in your village has just died. He was no special friend or connection of yours; neither was he an enemy. You and he were on perfectly good terms. Just a few days

ago you were out together hunting monkeys for dinner. Then he fell sick with a fever, and yesterday he died. Now the whole village is in a furor. Why did he die? He had been perfectly well. Why should he die like this, so suddenly? It must have been one of the many evil spirits that haunt the forest. Someone must have bewitched him. They all say this, because they cannot imagine, in their ignorance, that disease can come from any other source. At the same time they feel worried and afraid, because no one knows who will be charged with the crime. For, in order to lift the evil spell, the person who cast it on the victim must be "smelled out" and forced to recall it. You feel particularly uneasy, because you and the witch doctor had a little argument the other day about a rooster which strayed off. This was a trifling matter, and, to be sure, the witch doctor got the rooster. Still, you can't tell; perhaps he secretly holds a grudge against you.

The people are standing around talking excitedly and waiting for the village palaver to decide the tragedy. The sharp penetrating sound of the village drum suddenly rings out. It sends a shiver down your spine. These African drums are wonderful broadcasters, with their own code and language they can be heard at great distances; they are the telegraph and radio of the African savage. The drum says that the villagers must gather for the witch doctor's palaver. You and the others—scores of people with shaky knees—form a huge circle and squat down on the ground. You can

see how everyone is getting more and more excited and nervous. So are you. What if it should be you or one of your family?

Now the witch doctor is approaching. He is decked out in the most gorgeous and fearsome fashion, with paint and feathers and a big spear in his hand. He comes stalking into the great circle, and then, with a great air of mystery, begins to go around "smelling out" each person. Who is to be the victim? It probably means torture to obtain a confession, perhaps death for someone. Here he comes nearer and nearer, leering at people, crying out weird sounds, and brandishing his spear, a terrifying sight. He hasn't picked out anyone yet. And he is getting nearer and nearer to you!

Well, suppose we leave you right there! Think of living with this kind of fear always hanging over you! Every time something goes wrong you are in danger —no matter how innocent you are. It is a cruel form of slavery.

How would you go about helping people to get out from under this horror? Would you simply talk against the witch doctor? Would these simple minded people, brought up to believe in his magical powers, accept you if you did? Would they dare? The witch doctor has always been a powerful menace in their lives; they can't believe that you are more powerful than this one of their own tribe whom all fear. Or would you try to show the people something different and better? If you could really prove something to

them which they could see for themselves, wouldn't that convince them better than talking to them about their foolish beliefs and fears?

This is how the Christian doctors who have gone to Africa work it out. They believe that if they show how kindness, reinforced by scientific knowledge, is used to treat the sick, and explain the causes of disease, the people will gradually understand, and finally free their minds of the fear of evil spirits and witch doctors. As the people see the truth of what is demonstrated in treating diseases, they become open minded towards the Christian teaching of one great loving spirit, God, who cares for them. Thus slowly they lose their superstitious terror of a swarm of malign spirits that, with the witch doctor's aid, are always trying to do them harm.

Dr. Albert Schweitzer, the Alsatian scholar, chose to leave a great career in Europe to take up this kind of work in Africa because he believed that the people out there were the most needy; that as a Christian doctor he could render them the greatest service. He not only chose the hard field of Africa, but he chose a hard place in Africa. It was not a place where he could step into a ready-made job, but a place where he would have to be a pioneer.

Dr. Schweitzer was already a man with a great reputation as a professor of theology, as a writer and as a musician. His organ recitals and lectures on the great composer Bach were famous throughout Europe. His

books were widely read. He could have gone right on with a distinguished career. But a new purpose growing up in him led him to do an extraordinary thing. In the spirit of Christ he felt a tremendous urge to work for the most needy people. He gave up his position and career as professor, and started in all over again. He took the strenuous medical course in order to be of practical use in some needy part of the world. When he had finished eight years of this preparation —he was then nearly forty years old—he sailed for Africa in 1913, the year before the World War broke out. His field was to be one of the loneliest and hardest parts of the continent.

So here we have this versatile philosopher, musician, doctor, arriving in the wilds of Africa to start medical work from nothing. The place he chose is called Lambaréné, in French Equatorial Africa, and it is about two hundred miles up the Ogowe River from the sea. There was nothing there but a primitive house and a corrugated iron hut. Lambaréné was chosen, he says, because it was a center of river waterways to which patients could come in dugout canoes from various directions and from considerable distances.

Dr. Schweitzer didn't have to sit and look at a doctor's sign, waiting for his patients. Africa is a sick country. Since the treacherous witch doctor is usually all that the people have, a trusted missionary doctor is a godsend. And a good dugout canoe on a big river will land you at the door of the hospital. In fact the

river is the only good road in this dense jungle region. People build their huts along its banks and travel on it.

Perhaps your next question is, Did the people come to him? Were they brave enough to break away from the witch doctor and trust themselves to a foreigner? The Lambaréné witch doctors naturally didn't like to see their patients and their trade going elsewhere. Nor did they like to see their authority dwindling. They presumably did all they could to persuade the people to keep on with the old ways and not experiment with something new and dangerous. Of course, things didn't happen all at once. In any country some people move faster than others. There are always those who hang back. So it was in the region around Lambaréné. Some people would risk it and come to Dr. Schweitzer. When they found how kind he was, how so many people who had fevers got well, and when they saw that a man mauled by a leopard was so carefully and successfully treated, then more and more would come. In writing about his work recently Dr. Schweitzer said that there were from one hundred and twenty to one hundred and sixty patients at the hospital all the time. And there were only two doctors, at most, to take care of them. Sometimes he would be alone, as he was when he started. The fact that his hospital has so many patients answers the question whether the people come to him and trust him. It also answers a lot more. It means that they are

learning a new view of life, that some of them are gaining a new faith.

Of course it is not all plain sailing when one tries to give medical treatment to people who are hardly more than savages. They are confirmed in their ideas, just as we are in ours. The fact that their ideas are rooted in superstition and fear makes the problem worse. The evil spirits of the forest and the power of the witch doctor still haunt their minds. Just as we think that our American way is the only way, so they think the old African ways are the best.

But the new ways of the white doctor at first seem even more fearsome than the familiar ways of the witch doctor. For example, the missionary doctors have great difficulty in persuading people to take ether or chloroform anesthesia for an operation. These simple people are afraid of being poisoned and never waking up. A good deal of poisoning goes on among them, so it isn't altogether surprising that they are afraid of being put to sleep in such a magical way by a strange doctor. It seems to them a new kind of witchcraft. One evening Dr. Schweitzer heard a patient, who had just waked up from an anesthetic, say to a neighbor:

"Yes, the doctor wanted to kill me. He put some poison in my nose, and I was actually dead. But he hadn't given me enough, and I came to life!"

But when hundreds of people are put to sleep in this way and undergo serious operations without suf-

fering pain, and then recover, it cannot fail to impress the whole region.

One of the great scourges that the missionary doctors have had to fight is the African sleeping-sickness, which was formerly regarded as always fatal. Its victims slowly waste away, getting weaker and weaker, drowsier and drowsier, and more and more miserable until they die. There was no treatment for it. Now there is a remarkable drug, tryparasamid, developed by one of the Rockefeller Institute doctors (and similar drugs have been developed in Germany and France) which can actually cure the disease if used early enough in the trouble.

One of these sufferers, N'Tsama by name, when brought to the hospital was almost a skeleton, and was going crazy with the disease. Dr. Schweitzer treated him with tryparasamid, and he began slowly to improve. He got over his mental symptoms and regained strength. Then he developed a great urge for fishing and would stand for hours on the river bank, though without catching much. Dr. Schweitzer finishes the story:

One day, when there were planks to be unloaded and taken up to the hospital, I laughingly called to N'Tsama to leave his fishing and help us, whereupon he lifted up a plank and carried it away on his head. There is much jubilation over this in the hospital, because it is thus evident to all that even sleeping-sickness sufferers in the last stage of the disease, who have hitherto been doomed to death, can now be restored to healthy life. At the beginning of the summer N'Tsama asks to be allowed to help

with the forest clearing, and he stays with us as a laborer. "The doctor is my father (he says) and the hospital is my village." The only relic of the sleeping-sickness is a proneness to fatigue and irritation. On account of this he is only allowed to work when one of us is present, so that too much exertion may not be expected from him, and the others may not excite him by making fun of him. Since then we have had many excellent results from the use of this drug.

It is a wonderful victory that scientific medical research achieves when it finds remedies for diseases that once seemed to be hopelessly incurable.

The patients are usually very grateful for the care they have had. Most of them make payment in fruit or some other food—bananas or smoked fish or seedlings of breadfruit trees, for example. There isn't much real money to be had; so the friends of the patient are told to bring whatever they are going to bring while the patient is still in the hospital. If they don't pay then, they may never be heard from. The forest isn't much of a place for a bill collector.

Suppose, again, that you were in Africa as a doctor, and that you wanted to build a hospital in order to help the people. Can you imagine how you would have to go about it? It is pretty hard to imagine. You can't expect to build a hospital like ours in America. There are no materials ready, no factories or stores, nor are there architects, builders or workmen. The doctor has to be architect and builder and foreman; his materials are what we call raw—lumber obtained from the virgin forest, other necessities supplied by

nature and fashioned to use by primitive methods. And he certainly has his problems.

There are no skilled workmen, except as you train them yourself. Neither are there any labor unions. Whitewashing, for example, is a real problem.

We believed at first [writes Dr. Schweitzer] that we could train natives to do the whitewashing, but their chief contribution to the work was to ruin most skilfully the few brushes that we possessed. If a primitive gets a brush into his hand the brush has in two days not a hair left. I do not know how they manage this, but so it is, and as the whitewash must also be laid on very carefully, there is nothing for us to do but to do the work ourselves. Doctors and nurses vie with each other in the practice of this unfamiliar art.

With all these exasperations you might think a doctor would get tired and disgusted with such people. To a certain extent he does. But here is what Dr. Schweitzer writes, as he leaves his work to come home on leave:

It seems to me incomprehensible that I am leaving the natives for months. How fond of them one becomes, in spite of all the trouble they give one! How many beautiful traits of character we can discover in them, if we refuse to let the many and varied follies of the child of nature prevent us from looking for the man in him! How they disclose to us their real selves, if we have love and patience enough to understand them!

How would you raise money for your hospital, if you were working as Dr. Schweitzer is? That is a real problem. The African people of course can't pay

much, though they pay what they can in supplies of food, material, or labor.

Fortunately Dr. Schweitzer has a great asset which he can turn to account for the problem whenever he goes home to Europe on leave. His reputation as an organist, especially with the music of Bach, is such that he can draw large paying audiences for recitals. And from the proceeds of these recitals he is able to do a good deal toward covering his hospital expenses. His musical tours of Europe have been very successful; and he receives much applause and praise. Then, when his leave is over, he turns his face from the comforts and friends and success of civilization to the discomforts and ignorance and struggle of Africa. Could anything but an inspiring faith and love make a man do that?

Another man who feels keenly the needs of Africa, and especially the desperate problem of the witch doctor, is Dr. James McCord of South Africa whose work is carried on under one of the American mission boards. The people call him Big Doctor Jim. I think this applies to his spirit as well as to his physical bigness. I remember his talking about the witch doctors when he was home some years ago. He considers them to be the great obstacle in the lives of the people with which a Christian doctor has to deal. The witch doctor is the bane of Africa, he says.

When the witch doctor tries surgery he is particularly pernicious. This is how he operates to cure head-

ache. He cuts through the scalp until he gets down to the bare bone of the skull. Then he scrapes the skull-bone with some sharp instruments. You can imagine how much headache that will cure, especially as it is all done without an anesthetic and later gets infected!

Dr. McCord was once asked whether the witch doctor ever does any good to his patients. His reply was, "Possibly so, although I have never seen a case in which he did." Something very important that Dr. McCord emphasized is the need for training African doctors. The foreign doctors who go to Africa are never going to be sufficient in number to take care of the people adequately. For all this part of Africa there is about one doctor to every million people. What are one hundred and forty doctors among that many millions? And there is no particular prospect that this number will be greately increased in the next generation. There are plenty of witch doctors available, but it is a long way to the nearest Western doctor. So Dr. McCord and his associates have gone to work to train young men in medicine. He also has a nurses' training school, from which competent and useful nurses are being graduated.

Dr. McCord feels that the only way to get rid of the terrible bane of the witch doctor is to offer the Africans something better, which means providing enough practical doctors and nurses to go around. It is an ambitious program. No one man and no one school can come anywhere near carrying it out. But

the beginning has been made. And there is a great challenge in it for young Christian doctors and nurses to continue it.

Suppose we take in a sample of Big Doctor Jim's outside medical calls, and let him tell the story. A man had come in post-haste from a distant village to ask him to come and treat his sick wife.

I went into the mission nursing home about eight o'clock that evening to see if there was any excitement. Dr. Morledge was out for the evening, but the aforementioned father was there impatiently waiting to see the doctor. I listened to his tale of woe, grumbled a little at my luck, and climbed into my motor car with a pretty full kit of instruments and dressings. The father came along to show the way. We stepped on the gas and sailed off. As we were about to leave town, I heard a pistol shot beside the road. No, it wasn't a bandit. No such luck. It was a blow-out in a front tire. I had a spare, but my other front tire had worn thin and was likely to explode any minute; so I slowly drove downtown and found a tire shop that was open all night and luckily found a new tire to fit my wheel.

We finally left town at 10:15 P.M. There was a bright moon and my headlight and spotlight were in communion, so we felt quite happy but somewhat in a hurry. The trip to Verulam was uneventful except for the bumps. The road was nice and hard. Beyond Verulam the road was not bumpy and it was not hard. Decidedly muddy in fact. It was a strange road and I didn't know what was coming next. Several times I thought we were going to get stuck in the mud, or on the steep hills of which there seemed an endless succession. But by backing up and taking another run at the bad places we managed to get through.

I comforted myself with the thought that we were not many miles from our destination, and if we were stuck we could walk the rest of the way, and the devoted father would have to carry the box of instruments and dressings. We got higher and higher in the world until my guide finally told me that we could now walk the rest of the way. We did so for a mile or two further, until the dark hovel hove in sight.

The father knocked and a streak of light appeared under the door. I thought someone had turned on the electric light, but when the door opened I saw that the brilliance was caused by someone throwing a stick on the fire. By the blaze from the stick I saw about a dozen forms lying on the earth floor, some in heathen dress, some in semi-civilized dress, but most of them wrapped in their blankets. (The mother, who was the patient, was among those on the floor.)

It was midnight. Surgical procedure was necessary if the mother's life was to be saved. My operating table was the dirt floor. My electric light consisted of two small stone bottles of kerosene with rags stuck in to act as wicks. The operator was myself. My first assistant was myself. My second assistant was myself, My anesthetist was myself. It was a one man show. From the shadows of the hut a dozen pairs of eyes watched the clinic—more than a dozen, for others kept dropping in.

It was somewhat strenuous to give the chloroform and then operate while the patient was coming out from the anesthetic. However, everything went smoothly, and at two A.M. I was able to start on my homeward way. The mother's life was saved, and that was the main point.

I had thought that I would curl up on the back seat of the motor car and sleep until morning, then drive home in the light of day, but the father carried my small trunk to the motor car for me and expressed a desire to go to

Durban with me, to get medicines for his wife, so I decided to drive straight through. I got to bed at 5:30 A.M., about the time I usually get up, and got an hour and a half of sleep before beginning my day's work.

It was a hard night's work, but very satisfactory. It always is if you can save a life or relieve suffering.

That is the only reward that the missionary doctor expects, and he treasures it. Nothing less would keep Dr. McCord in Africa any more than it would Dr. Schweitzer.

If you were set down in Africa, as we have imagined, and had laboriously built your hospital, you would realize, after all, what a drop in the bucket one hospital is, or what a hundred hospitals would be, in huge Africa. You would probably come to the conclusion, as Dr. McCord has, that the people must learn to do for themselves. They must develop doctors and nurses of their own race, with the help of the foreign doctors and nurses. Moreover, the teaching process must begin right in the homes. The mothers must become intelligent and ambitious to learn sanitary ways of living through Christian ways of thought and faith.

I don't know of any story that has appealed to me in this connection more than that of Dr. Agnes Fraser, of Scotland, who has been one of the inspiring women doctors of Africa.

She was among those who were deeply impressed with this need of teaching. What good was it to cure babies when the mothers were actually killing them

by the terrible methods of care that they followed? Dr. Fraser found that over seventy per cent of the babies in her region were dying. They were dying of perfectly preventable diseases or of mishandling. Babies just born would be left to lie for a while uncovered and naked on the cold, damp, mud floors. Food that should not be given to babies before they are nearly a year old would be forced down their throats. No wonder over seventy per cent died.

The people, she found, were at first afraid of everything strange and different. Even a very simple hut-like hospital was too big and queer for them. They were terrified to stay inside of it. But gradually they got used to it.

Of course, new ideas of any kind were even harder for these simple savages to understand and accept than this primitive hospital in which they must stay. Dr. Fraser began simple lessons with them. She had objects with which to illustrate the ideas. One of these was Tobias.

Tobias was a celluloid doll which Dr. Fraser used as a model for all sorts of teaching. Tobias was a wonder. He survived everything from being bathed and bandaged to being poulticed and put to bed. He even had a pot of boiling water dumped over him. This was in order to show how burns should be treated. Tobias was fixed up after this imaginary accident with applications and dressings until he convinced the real sufferer. When Dr. Fraser was teaching the women how important rest is in a critical illness (instead of

having a room full of talking, shuffling, friends and relatives) Tobias did duty again and slept profoundly. The women actually tip-toed around so that Tobias, in his fevered sleep, should not be disturbed. They became very fond of him. I should think he would have gone on strike when it was decided he had the itch and must be covered all over with sulphur ointment!

When Dr. Fraser wanted to teach the women about germs, and that boiling was the way to kill germs in water or food, she illustrated with an egg. A boiled egg couldn't, of course, produce a chicken. No setting hen could hatch a hard-boiled egg! They knew that. And she pointed out the comparison. Boiling killed the life in the germ just as it did in an egg.

Dr. Fraser's mothercraft classes grew and flourished. Women came in for courses of a few days of systematic teaching, and they loved it. The chief quality she aimed to develop was confidence in themselves to go ahead and do the things they had learned. One of the women made Dr. Fraser proud of her work. Off in her village, this woman's child came down with dysentery. Most African children would have died of it. This mother, however, being too far away to get a doctor, followed instructions for three days of severe illness and pulled her child through. It gave her a great feeling of satisfaction to know that she could put into use what Dr. Fraser had taught her.

An old man, once a redoubtable warrior, brought a new-born baby forty miles to Dr. Fraser. It wasn't

his baby, but no one else in the village would do anything about it, so he got busy and carried the baby all that distance. On the way he just gave the baby clean water, following the doctor's advice. And the baby was saved.

After a few days of one of these mothercraft classes in which the women were keenly interested, one of them exclaimed, "To think of the things we used to believe!" "When?" asked Dr. Fraser. "Last Monday!" was the reply.

Experiences like these of Dr. Fraser's—or, for that matter, of Dr. Schweitzer's or Dr. McCord's—show something of the possibilities that there are in primitive peoples. If you think the African people are stupid, just try to learn more about them. Stupid? Not a bit of it. The doctors I know in Africa tell me that the young fellows whom they bring into the hospital to train as assistants observe keenly and learn rapidly. And eventually they become very skilful. One of the doctors I know said that he no longer cares to give the special injections for sleeping sickness, or for some other diseases, in front of his African assistants, because they now do it so much better than he does. He trained them originally, and they have done so much of it that they have become experts.

So the missionary doctor, although inadequate in number for Africa's gigantic need, strives to overcome this handicap by developing the wonderful human and spiritual possibilities of the Dark Continent and training them for its own service and betterment.

Chapter Four

MEDICAL SERVICE ON DESERT AND UPLAND

"YOU dirty dog of an infidel! You scum under my foot! May Allah condemn your parents to Jehannum (hell) for bringing you into the world! I have a pain in my stomach. Give me some medicine!"

Sitting in his clinic Dr. Paul Harrison, of Bahrein on the east coast of Arabia, looked up at the tall Bedouin, a real son of the desert. From under the burnous of wool that protects the Arab's head from the extreme heat, black eyes glared down at him with hate as these guttural Arabic words were uttered with all the venom that a fanatical Moslem uses toward an infidel—a Christian or a Jew.

To us it sounds incredible. Here was a man suffering, yet he was asking for medicine in insulting language, and, what is more, expecting to get it! Our immediate come-back to any such peremptory and insulting demand would probably have been a sharp one.

Not so Dr. Harrison. He knew the proud, fanatical Mohammedan of the desert, and his hatred for the infidel. Lacking the polished ways of more civilized regions, where polite words just as often cloak hatred,

this rude, rough son of the desert was unable to hide his disgust at having to admit that a Christian doctor was more effective than his own wise men. Unaccustomed in his desert life to ask or give favors, least of all with Christians, this Arab was furious at being forced to ask a favor of Dr. Harrison. In the desert he fought and killed for what he wanted, and he had been raised to loathe all infidels. The real Arab of the desert will not eat with any of us, because he considers us unclean.

But it didn't bother Dr. Harrison in the least. He knew that it was just as right and natural for the Arab to talk that way as for us to say the Lord's prayer or salute our flag. This was just the sort of man a medical missionary goes out to win to friendship and Christian understanding.

Well, the rest of the story is just as interesting. This fanatical, scornful, Bedouin stayed in the hospital for a couple of weeks and got well. Besides, he learned that the foreign doctor from Johns Hopkins who took such skilful care of him was no ogre or infidel or contaminated substance, but a real man like himself, with the heart of a friend. Little by little the desert prejudice thawed and melted. Before he came to leave he was a real friend. I claim that when you have made anything like that happen you have done something.

Then, if you remember that hundreds and thousands of more or less similar experiences are taking place in mission hospitals in Arabia—to say nothing

of other countries—it means that people are really being changed. The Christlike spirit is being felt.

At one time Dr. Harrison was traveling up the Euphrates River in a small boat. He was the only foreigner with the Arab boatmen. River travel in such boats is slow going, especially upstream. But it gives time to get acquainted and make friends. It is hard work for the men. And every so often they tie up to the bank for a rest. One day, while their boat was tied up in this way, another Arab came along the river bank and saw these fellow-Arabs with this infidel foreigner. He was one of the orthodox desert Mohammedans like our fierce friend of the clinic. It shocked him to see good Mohammedans on familiar and friendly terms with a lowdown, infidel Christian. So he cried out to them:

"Why do you do this? Why do you defile yourselves with this dirty dog of a Christian?"

Now those boatmen had become good pals of Dr. Harrison, and they weren't going to have this fellow calling him names. So they charged up the bank, brandishing their sticks and made for him. He fought back as they pursued him for some distance while they engaged him in a running fight.

When they finally returned, rather warm but apparently pleased with the fray, Dr. Harrison asked them:

"Why did you go after that man and try to beat him up?"

"Why," they said, "didn't you hear what he called you? He called you a Christian!"

"Well," said the doctor, "that's perfectly correct. You know that that is what I am."

"Oh," they said, "we know that. It's all right with us. But we weren't going to let *him* call you that!"

Then there was another of his Arab patients for whom Dr. Harrison did a very unusual thing. A child who was brought to him had what is called a hydrocephalus—or water on the brain. It was born so. It meant that the child would live a few years without developing properly, and then would die. The parents brought him to Dr. Harrison, having heard of his great reputation.

At that time a new operation was being tried by a few surgeons to relieve this hopeless condition. It consisted in cutting a vein out of someone's arm and transplanting it at the bottom of the patient's brain. There was some reason to hope that this would help.

Dr. Harrison decided to try this operation as a last hope to save the child. It was a daring thing to do in a small, mud-walled hospital in Arabia, with no competent person to help him. Of course he told the parents honestly that he couldn't promise them anything, but that it was the only glimmer of hope there was. They talked it over and consented.

Then came the next question. What member of the family would volunteer to offer a vein? Dr. Harrison explained that the removal of a vein was perfectly harmless as the body soon made up for it. But

they were too much afraid. No one would sacrifice that much or take a chance. Thereupon Dr. Harrison decided to take a vein from his own arm. He sterilized the spot, cut through his skin, dissected as much vein as he wanted, and then, having prepared the place in the child's head, he planted the vein in and sewed it up. Can you imagine how the family and friends looked on! Whoever heard of such a thing! It was the talk of the town.

Well, the child was no worse for the operation; the place healed up all right. The operation, however, did not help the water on the brain. But think of the impression made on those people!

I had lunch with Dr. Harrison in New York, not long before he and Mrs. Harrison went back to Arabia, and heard him tell some of these experiences over again. Then I told him some of my experiences in Persia. We swapped funny tales of our medical adventures and had some good laughs. It helps a medical missionary to have a sense of humor just as much as it does anyone else, or more so. It would be pretty hard to stand the strain if you couldn't ever see the funny side.

Arabia is practically next door to Turkey, where my father was a medical missionary for many years. In fact, until the World War, Turkey ruled part of Arabia. The Arabs and the Turks have been strong Mohammedans, though, since establishing a republic, the Turks have taken up many new ideas in recent

years, and are no longer such fanatical Moslems. When we were children up in the central part of Asia Minor, which is the heart of Turkey, in the days when the cruel sultan Abdul Hamid ruled the country, we used to see a great deal of my father's medical work, as the hospital yard was just over the stone wall from our yard. We used to see the patients—all sorts of patients—coming to the dispensary. They came from near and far; and they were the rich and the poor, peasants and even a pasha or two, and from every race and religion of Turkey.

Many of the people came on donkey-back, jogging hours or days through the heat and dust. Others came stretched on an ox-cart. Such carts as these are crude affairs that squeak and jolt and labor along the rough roads. Not exactly de luxe ambulances! Horseback was the way for many others. Some patients came perched upon camels. The well-to-do would come in carriages. Then a great many from near by would come on foot.

The patients' horses and the donkeys used to be stabled in a certain shed in the hospital yard. Every now and then there would be a row among these horses, since nearly all were stallions, and much squealing and kicking and commotion ensued. The owners would rush in and separate the fighters. We children used to think these fights were a great show staged for our benefit. Whenever we heard the sounds of battle we used to rush out and clamber onto the

shed, which had many convenient knotholes and cracks through which we could peer down at the fun below. Sometimes we would lie stretched out on that shed for a long time hoping for a free show in the way of a fight!

Of course we talked in Turkish with the people who came there, as children would, and used to hear how much they thought of the American doctor, my father, the late Dr. William Schauffler Dodd. In those days there were almost no other doctors worthy of the name in all that great part of Turkey. The nearest medical missionary was Dr. Fred Douglas Shepard, of Aintab, a place several days' journey away, on the other side of the Taurus mountains. He also was a much-beloved doctor with a wide reputation.

Thus there grew up a saying among the people: "South of the mountains Shipard, Shipard, Shipard. North of the mountains, Tot, Tot, Tot," which was their way of pronouncing Shepard and Dodd.

In those days of the evil Sultan Hamid Turkey went through some bad times, for the country was very different from what it is now. Once there was one of those fanatical outbursts on the part of the Turks against the Armenians, who were a subject race and Christian in religion. On one occasion the wild element among the Turks was about to attack our town of Talas. The rumor leaped ahead of them, and there was panic in Talas. The terrified Armenians came

fleeing into our grounds, hoping for protection. I remember how panic-stricken and helpless they were.

Among the patients at the hospital just then was a Turk who was getting well from an operation. He had his gun with him, as it happened. When he heard that these other Turks were about to attack the doctor who had made him well and befriended him, he acted promptly. Calling for his gun, he stationed himself in an upper window which commanded the approach to the hospital, and vowed by the beard of the Prophet that he would give an account of himself before they touched a hair of the foreign doctor's head. The attack did not come off. But if it had, I don't doubt that he would have defended us vigorously.

Like Dr. Shepard, my father did a great deal of traveling about to see sick people in the outlying villages, usually going on horseback. These villages were poor, cheerless affairs built almost entirely of mud bricks. The houses often had only one room, in which the donkeys and the sheep lived along with the family. The flat roofs were made of mud, the walls of mud, and the floor just packed mud. Many times an emergency operation would have to be done on the floor. On one occasion, when my father was operating on a poor woman on the mud floor of a village house, the family donkey strayed over from his corner and suddenly started to bray deafeningly right at the doctor's ear. It always pleased my father that his hand kept steady in spite of the startling outburst.

Much of Father's traveling was done on the back of Prince, a splendid chestnut horse—supposedly part Arab. He was one of the fastest and most tireless horses around, and very intelligent. For a time I had the job of currying and feeding Prince. On one of his winter trips Father was caught in a heavy snowstorm. Pretty soon he found he was going around in circles, as people so often do out in blizzards. So he concluded to trust to Prince. He dropped the bridle on his neck and spoke to him encouragingly. Prince seemed to sense the situation, pricked up his ears, and made a new start. Before very long he had worked it out right and brought up at the next village.

Donkeys are a very important part of the life of the Near East. A lot of the short-haul work is done by them, such as taking produce into town, or vending food and merchandise around the streets. The donkey often becomes a kind of five-and-ten-cent store on legs. One time a boy, whose eye trouble Father had cured, brought his blind donkey to the hospital. The donkey was his means of earning a living. His faith in the Hakim Bashi (Chief Doctor) was unlimited. Wouldn't he cure the donkey? Unfortunately the donkey had an incurable trouble. And the boy was much disappointed.

As my father's work grew he felt that a hospital was a necessity. You can, of course, do some emergency operations and give out medicines under bad conditions. But for good medical and surgical work which

will really help people the most, it is necessary to have a clean place, reasonably up-to-date equipment, trained nurses and a laboratory for diagnosis. Little by little the money for such a hospital was raised among friends in America. And a very serviceable, though simple, hospital was built, which did duty for many years, during which thousands of patients came to its clinic and wards.

Both Dr. Shepard and Dr. Dodd were pioneer surgeons of the Near East at a time when there were hardly any surgeons in that part of the world. Their inspiration was always Christ. They loved their work, and they loved the people. And the people loved them. Not that they had no opposition; there was plenty of it. There was jealousy among the native doctors. There was always suspicion from government officials of the Sultan. And, of course, strong Moslems had no love for them as earnest Christians. But they left a wonderful memory which still lives. In both cases their sons followed in their footsteps. Some of the more ignorant people bring in curious legends that are circulating around the countryside to the effect that "Tot" had come to life again as a young man, and was back among the people in the person of my brother, Dr. Wilson Dodd. One version of the story was that my father became very tired from the work, so he had been put away in a huge earthenware jug, as in the story of Ali Baba and the forty thieves, and that during these nearly twenty years he had rested

and grown young again, and had come out as a young doctor once more!

Arabia, Turkey and Persia are neighbors in the Near East. Certain of my experiences in Persia during the war were like some of those that my father and Dr. Shepard had gone through years before in Turkey. Here is a tale about a good friend of mine who was my senior associate when I began work in northwest Persia.

It begins with a big, husky, football, baseball and track star from Colorado College, Harry Packard, who became a doctor, practised successfully a few years in Colorado, and then went out into medical mission work in Persia. A man six feet, four inches in height, and weighing over two hundred pounds, makes even more of an impression in the Near East than he does here, for the people there are on the average shorter than Americans.

Dr. Packard's station was Urumia, in northwest Persia on the border of Turkey. The mountains and the wild, marauding Kurds who lived there, made up a picture something like that of the Afghan border where Dr. Pennell worked. The Kurds were in those days the fear and dread of the Persian border region. Every so often, in small bands, or occasionally in great hordes, they swept down on the Persian plains, raiding the villages right and left, killing freely, kidnapping a few women maybe, and departing for their mountain homes and strongholds. They had their

good qualities too. They could be friendly and hospitable and loyal. Several of us who worked in that region came to recognize these traits and had friends among them. I spent a very interesting and enjoyable day in the village of one of these chiefs, Amar Khan, who was a good deal of a bandit but a very genial host.

Dr. Packard, in particular, came to know them well and was well known by them. He traveled frequently up into their country, and they came down as patients to his hospital. Some of them were staunch friends of his and great admirers of his surgical skill. Year by year his work and his reputation among them grew. Then came the crash of the World War. Persia wasn't officially in the war; but the Turks and Russians began fighting each other across the corner of Persia where Urumia is located. Every time the Turks started to invade the country an avalanche of lawless Kurdish irregulars swept along ahead of them, for it was a wonderful chance to loot and kill. On the first of these occasions, in 1915, the Christian people of the plains were quite unprepared. The cavalcades of hard-riding Kurdish horsemen were upon them before they could flee.

Hearing that a great swarm of the Kurds was coming up toward Urumia from the south, raiding as they went, Dr. Packard, who knew several of the leading chiefs, decided to ride out to meet them and see if he could intercede in behalf of the people of those villages. Carrying an American flag he rode out from the walled city of Urumia on his daring errand with

a few Persian companions and servants. Who knew what the fighting Kurds would do to anyone they met?

As they rode on a few miles from the city, they heard sharp firing off to one side. They swung off that way and soon found that the firing was from the Christian village of Geogtapa, which could be translated Skytop. The situation was this: On a low hill in that village is an old Russian church within a high-walled enclosure. As the Kurds swept upon them, the people had rushed to this enclosure, and, with the few arms they had, were defending themselves from behind these walls. The Kurds were posted all over the village, firing at them from various directions and waiting to rush them when their ammunition gave out, as it was bound to do presently.

There was no time to be lost. The situation looked desperate. Most men would have turned back while they could. Here were these age-old enemies in the thick of a small battle, the brutal Kurds without and the Christian village people within. The Kurds had tasted blood and some of their fighters had been killed or wounded, and they were bent on revenge. It was a matter of time—a few hours or perhaps a day—before the hundreds of people within would be overpowered and massacred. They could be sure of that. There would be no mercy.

Dr. Packard found the Kurdish chiefs directing the attack in a neighboring village. He rode in and dismounted at the house which served as temporary

Kurdish headquarters. He was greeted variously by the assembled chiefs. Some were rather friendly; some were decidedly not. In general, they didn't welcome any interference.

Then followed a strange and dramatic scene. Here sat the large circle of Kurdish chiefs, armed to the teeth, bent on carrying through their fight. In and out the door men came and went, bringing word of the fighting and taking out orders. And in the midst sat this big American doctor who was putting up a plea for the lives of the Christian people. He appealed to his friends among the chiefs as a personal favor to him to let the people go. A few among them showed some friendliness, but the others were bitter. It was no business of his what they did to those infidels!

"They have taken the blood of our young men. And will we let them go? No, by the beard of the Prophet—and Allah be our witness—they must all be cut down!"

So the debate went on hour after hour—Dr. Packard pleading, advancing every argument he could think of, hanging on, though there seemed almost no hope.

At the height of the debate one old grizzled chief came toward Dr. Packard and waved his vicious curved sword in his face, threatening and cursing. Away with him! The infidels must die! Out of our way and on with the killing!

Perhaps his football toughness helped. But, anyway, Dr. Packard couldn't be scared away or tired out.

He kept at them. And little by little his friends prevailed and the opposition wore down. Finally negotiations began for taking the people away from the Russian church. Dr. Packard planned to take them to his mission compound in Urumia.

It was a ticklish business at best. Even if the chiefs agreed to let Dr. Packard lead the people away, could the Kurds be trusted? Could their leaders restrain their hot-headed young men two miles away in "Skytop" from firing on such easy victims? Dr. Packard's experience with the Kurds was that if they gave their solemn word it could be relied on. There was no question about the risk. But it was the only hope. The agreement was made. They would let him take the people away. But he had to ride into "Skytop" right under the rifle fire of both sides without any definite assurance of control there.

Now came the other half of the program—to persuade the Christians inside the walls to accept the terms carried by Dr. Packard, and come out where they would be exposed to attack. Dr. Packard went up to the great gate of the enclosure and the Kurds stopped firing. One of the Christians who was guarding the gate told me several years later what then took place.

"We couldn't believe that the Doctor Sahib had come," he said; "and when we heard the voice shouting to us from outside the gate, we didn't know who it was. Then I recognized his voice. And we saw that

we could open the gate and let him in." How his face shone as he told about it!

To lead the people out from that temporary safety to the hazard of the exposure outside was an awful responsibility. For a while they were of two minds. Could they risk it? Dr. Packard assured them of the agreement with the Kurds. And finally they took the chance.

Men, women and children filed out, laid down what arms they had, and, forming a great column—seventeen hundred of them—started out through the village toward Urumia. Not a shot was fired. The Kurds kept their pledge. Dr. Packard followed at the rear of the column, and they arrived safely in the mission grounds at Urumia.

Over the main gate of these premises floated an American flag, which when the Kurds occupied the city, for months thereafter was the one visible protection for these people and hundreds of other refugees.

Some time after this rescue Dr. Packard came down with typhus. In the midst of his delirium he was constantly going over the tense experience with the Kurdish chiefs at Geogtapa, arguing, pleading, haranguing, for the lives of the Christian refugees.

Of course, incidents like this are rather exceptional in medical missionary life and work. If I were to give the impression that similar experiences are the usual order of the day it would be a mistake. The usual routine in a mission hospital may seem quite hum-

drum. Adventures form a perfectly true part of the picture, but they are not its everyday life.

Since those stirring war days Persia has made steady progress in the organization of a public health program with which the missionary doctors are cooperating. Strategic centers for mission work are already occupied and are being developed. For example, Dr. Packard and his associates have recently completed a fine new hospital in Kermanshah, to which his work has been transferred from Urumia.

A Princeton man, Dr. Joseph Cook, went out to Persia about twenty years ago. Persia was at that time a very backward country. Things were done and life went on in practically the same way it had gone on for centuries. If a person from ancient times could suddenly have been dropped in on a Persian village twenty years ago I think he would have felt pretty much at home there. He might have seen some guns which were modern. He might have seen some old, tattered newspaper pictures on the walls which would be strange. But the houses and the clothes, the ploughing and the reaping, the donkeys, camels and oxen, would have been familiar.

Even in Teheran, the capital, there was not very much of modern progress then; there is now. There were then very few Persian doctors of any modern training or dependability. And there was no real hospital in that big city of perhaps three hundred thousand population, except the mission hospital.

Dr. Cook, with his magnetic personality, had been one of the most popular and respected men in his class at Princeton, and in Persia he soon made a large place for himself. Recognizing his fine medical skill, numbers of people began to flock to him. An early letter from him shows his enthusiastic spirit:

I've never had such satisfaction in my life. This giving sight to blind people is wonderful. A blind girl came twelve days' journey—we operated on both eyes—both turned out well. Where's the sacrifice to have this privilege? . . . I've seen more interesting and more curious and rare and hard cases here than I've ever seen at home —cases which I can find no reference to in textbooks of medicine. . . . Mother cabled me that Princeton and Yale tied. I am sorry we did not win but am glad we did not lose. Princeton has certainly had a boom year—Wilson President-to-be, and athletic victories galore.

After a while Dr. Cook's eager pioneer spirit, always longing to reach the poorest and most neglected people, grew restless with the comparative comfort of Teheran. He wanted to push out into something harder where there was more need.

Off to the east, near the border of Afghanistan—the opposite side of Afghanistan from where Dr. Pennell worked—there is the sacred shrine-city of Meshed. It is nearly six hundred miles from Teheran. In those days the journey between the two cities meant two weeks of hard travel by carriage, day and night, with frequent change of horses. It greatly appealed to him to go there and open a new work. It would be hard and perhaps dangerous, for the people

were fanatical and hated all who were not Moslems. But to Dr. Cook they were all human beings, and human beings in need. Dr. Cook went there, with an older man, the late Mr. L. Esselstyn, a minister.

In spite of the prejudice and hostility in Meshed, there was a surprising response to his work. In less than seven months he had seen over sixteen thousand patients in the city, beside many more outside the city, and had performed three hundred and fourteen operations. On one record-breaking day he saw two hundred and fifty-five patients. He had no trained assistant with him. Mr. Esselstyn frequently helped him, and Mrs. Cook acted as nurse. All this went on in a city where Christians were anything but welcome, and where they probably could not have remained if it had not been for the need of the people and the popularity of the American doctor.

Dr. Cook kept pointing out the opportunity of such a place. "All roads lead to Meshed." Pilgrims came from all directions, hundreds of miles, to the famous shrine, which made Meshed one of the three most important religious centers of the Moslem world. People came from Afghanistan and Arabia and India and Russian Turkestan as well as from all over Persia. This meant a great chance for medical service, for many pilgrims would arrive sick. The Christian influence of the hospital, its teachings and its spirit, would be carried to all sorts of distant places where there might never be any other Christian contact.

When Dr. Cook and his family went home on fur-

lough they left behind them a host of friends in Teheran and Meshed. He was eager to get back to Persia. In the meanwhile the World War made conditions very complicated. So, instead of bringing his family back to Persia with him, Dr. Cook started alone. On the way, however, he showed signs of tuberculosis and had to give up Persia. He rested for a time at Dr. William J. Wanless' hospital in Miraj, India. But after a while it was evident that he was not gaining as he should, and he was sent back to America.

As his health returned, he went into practice in Banning, California. He developed a large practice, with tuberculosis as his specialty. But, no matter how successful he was, his thoughts always turned back to Persia. For a long time it seemed that there would be some risk if he were to return, but finally, after he had spent ten years in America, the doctors and all his advisers felt that he could safely return. He was delighted. He went right to work, handing over his practice and disposing of his medical equipment. He was giving up an income of twenty thousand dollars or more a year in order to go back to taking care of poor people in Persia on a small missionary salary.

So in the fall of 1929 the happy family of six—including two boys and two girls—sailed for Persia. They were assigned to Hamadan, where Dr. Cook would work with his good friend Dr. J. Arthur Funk, who has a fine hospital there. Dr. Cook, who was always eager to reach the poorest people, presently

branched out into some clinic work in addition to that at the hospital. When I was there a year later, in the fall of 1930, he told me how he took a carriage and drove all around the city looking for the worst section. He finally settled in what seemed to him the poorest quarter of Hamadan. Here are extracts from his clinical journal:

We have had our dispensary practically every week-day morning from eight to twelve. The majority, possibly seventy per cent, of our patients are women. Many of our patients have been more or less regular attendants and have learned to come with their babies whenever in need of care. When one realizes that in Persia it is practically necessary to have three or four children in order to keep one, one can realize the splendid opportunity we have to educate these simple, ignorant, natural, good women. "I've had twelve children, this is the only one left." "My boy is very sick, I only wish it were my daughter instead." I challenged this remark and learned that her daughter was deaf and dumb from scarlet fever. . . .

So often when women are sick for a long time they are turned out—divorced. Scores of such deserted sick women come to us for treatment. . . .

Little girl mothers with their sweet, sad faces; older women with Madonna type faces, the majority wistful and evidently yearning for something better. Essentially good, although in rags, loving their babies as we do, smiling when we are kind to their babies or themselves, always modest and always trustful, it has been the greatest privilege of my medical life to minister to the needs of these poor people. . . .

Since July 1, 1930, to June 30, 1931, we have treated in our dispensary 21,378 patients. . . .

One's heart goes out to these poor ignorant people when they bring dying patients expecting miracles, and oh! how a doctor wishes he could say with Christ, "I say unto you, arise, and be healed."

Dr. Cook was in this tide of glorious, happy work when he suddenly became ill. Presently it was found that he had typhus fever, one of the deadly sicknesses of the Orient. The doctors and nurses labored over him. But the dread infection was overpowering; and he slipped away. The shock and sorrow in the city of Hamadan and to his friends in America can hardly be described.

Even those who knew what an impression his work was making were surprised to see how the city of Hamadan was moved by his death. A striking evidence of this was the delegation of Moslems which came with the request that he should be buried in their cemetery. This was an extraordinary request, when one recalls the feelings that Moslems have usually held toward non-Moslems. But it shows something of their love and admiration—almost veneration—for his example of self-sacrifice in their behalf.

Chapter Five

ALL IN THE DAY'S WORK

WOULD you like to have a close-up of a mission hospital? The one in which I worked at Tabriz, Persia—to describe the one I know best—was a substantial, ship-shape, brick building within a large walled enclosure or compound. All through the Orient such compounds, nearly every one with a gatekeeper, are to be found. Our Persian gatekeeper, Gambar by name, was a rather meek and kindly man, whose headquarters were in the little gatehouse by the large gate which opened onto the main street of our quarter of the city. It was his job to let in patients, bring messages to the doctor, and, incidentally, keep out people who had no business within. He also helped with numerous jobs about the place.

My day's schedule, which is a fair sample of that followed in many other mission hospitals, runs something like this:

6:30 Language lesson. This was put early to be sure of it. My teacher, a quaint, one-eyed, old Persian gentleman, would shuffle in with his loose slippers and his polite salaams, to drill a rather sleepy doctor on reading and writing a language whose curlycue characters run from right to left.

7:30 Breakfast. This was a good deal of an American meal, though the typical Persian breakfast is tea and bread and goat cheese.

8:00 Short worship service with the hospital staff and those patients who could go about. This makes a helpful start for the day.

8:15 Making rounds among the patients—giving not only directions for their care but also hearing what they have to say and trying to encourage them.

9:00 Three days a week the morning was given to the downtown dispensary, which happened to be about twenty minutes' walk away. This would mean seeing some thirty or forty old and new patients afflicted with a variety of diseases.

Afternoon. Following lunch, calls on special private patients in their homes; consultations with Persian doctors; surgical dressings in the hospitals; miscellaneous matters of hospital management. Perhaps a little tennis before dinner.

Evening. Make rounds again. Perhaps work on hospital accounts, attend a meeting, write letters or read.

Night. On call for maternity cases and emergencies.

Into this schedule the most unexpected things often intrude, which may seem trifling but which in less civilized countries can be very annoying and inconvenient. Perhaps the first announcement made to the doctor after breakfast, or before, is that the stovepipe in the operating room has fallen down. It happens to be a cold morning; and it is only one hour or so be-

fore operating time. The stovepipe has to be fixed, the fire made and the room warmed before he can begin to operate. Many mission hospitals, to be sure, are in tropical regions where stoves do not exist, but the tropics produce their own peculiar emergencies in the most unexpected manner. In such countries the doctor may be greeted in the morning with the news that a band of monkeys from the nearby jungle have raided the storeroom and scattered supplies all over the place.

An ever-present cause of annoyance is the matter of *baksheesh,* a Persian word which means a gift of money and is used commonly throughout the Near and Middle East. Where people have been accustomed to paying or receiving *baksheesh* for any favor done, it is very hard to get an honest gatekeeper or attendant who will not yield to the temptation to ask for a "tip"—really a bribe—in return for certain favors, such as allowing patients to see the doctor out of turn. Often the doctor hears nothing about this sort of thing. The patients are so used to it among themselves, that they think they will get along better if they make no complaint against the hospital servants. But, of course, anything like that around a Christian hospital is against its spirit, and the doctors and nurses stop it whenever they can.

One of the regular jobs for the doctor or nurse in the mission hospital is to go over the daily accounts with the cook or the buyer. This means much detailed figuring in which there is plenty of chance for

honest mistakes and plenty of chance for cheating. The shopkeepers are likely to think that the foreigners have plenty of money (because they do handle more of it than most of the townspeople do) and so charge extra. I can remember many a weary evening session of trying to make my accounts balance.

In most mission hospitals in the Orient the water supply is a great problem. Very likely it has to be pumped or drawn by hand from a well or cistern, or, worse still, it may have to be carried on a coolie's back, or donkey's back, or by cart, from a distance. For many years one of the greatest hospitals in India, that founded by Dr. William J. Wanless at Miraj, had to employ coolies who spent their whole time bringing in water on a cart—all day long, back and forth. Then, when you remember that the source of water supply in many places is likely to be contaminated, you will see how very difficult it becomes to have plenty of clean water for the hospital. Drinking water throughout the Orient must, of course, be boiled, and the servants, who don't understand the reason for boiling water, have to be constantly watched lest they become careless.

If they are careless, serious consequences may follow. To give one example, an invaluable missionary, who held most responsible positions, died suddenly of cholera. On investigation it was found that the cook had been washing the dish-rags in a filthy ditch beyond the kitchen. It was plain where the infection

came from. The careless servant had really killed a man whom he wouldn't have harmed for the world.

In the tropics flies are even more of a pest than in this country and Europe. Flies, as we know, are dangerous carriers of filth. In mission hospitals it is often difficult to arrange effective screening. To train people to keep doors and window screens shut, especially doors, takes the combined efforts of the whole staff. Servants or friends of patients leave them open, and soon the place is swarming with flies. And it is part of the job to explain the menace of flies. Education in health measures is a slow and discouraging process, because it must displace years of ignorant custom and habit.

Many small or large annoyances appear in the day's work of a mission hospital. The equipment is often not of the best and creates difficulties. Suppose, after a tiring day, you are called in the middle of a cold night, and hurry to the hospital to handle an emergency case. You want some instruments sterilized right away. The nurse finds that the alcohol heater or oil heater won't work. You both fuss and tinker, in a frigid room in winter or a sweltering room in summer, and then maybe decide to make a fire of charcoal or wood—the universal fuel of the Orient—a process which calls for time and patience.

I mention all these difficulties and problems to show that medical missionary work carried on in the spirit of, and for the sake of, Christ, is not all excitement and romance and glory. It is hard, steady, often

worrying work, especially if the doctor lacks trained assistants and nurses and a properly equipped hospital.

Moreover, if we give the impression that patients flock to the mission hospitals, and that it is all smooth sailing and popular acclaim, that would be wrong. There are two sides to the picture. First, a new doctor in the Orient must make his or her place, in much the same way as if starting practice at home—through character, skill, and patient hard work. Recognition and results may be very slow. Many of the people do not want the modern system of medicine, they prefer their old systems; or they hesitate about a new foreign doctor—he is so queer and different; or they say the hospital is too far away. Some of the younger medical missionaries starting in a new place have become discouraged during these early months or years.

Again, since people are much the same the world around, they are likely to become critical when things go wrong. This is especially true of ignorant people in their relations with foreigners whose ways are strange. Often they think, no matter how hopeless a patient may be when brought to the hospital, that it is the hospital's fault if he dies there. Then, too, there are likely to be unfriendly or suspicious or unscrupulous people about, as in any community, who are ready to make accusations against a foreign hospital, or against a native hospital for that matter. Sometimes these criticisms and accusations are very hard to deal with; they may mean fewer patients, because the peo-

ple are doubtful or have fears about the doctor and the hospital.

In this chapter I am intentionally showing something of the everyday, unexciting side. Let me take a rather typical page from the diary of Dr. John D. Bigger of Korea:

There goes the community telephone. It is after six and nearly time to get up, so I jump into my clothes and hasten down to answer. It is only R. wanting me to stop in on my way to the hospital to see his cow which has the colic. She is an American animal and very precious, as she supplies all the missionary children with good, rich milk. The early call gives time before breakfast to audit some accounts for the missionaries, a part of the doctor's station work.

After breakfast and prayers the dormitory of the school for foreign children must be visited to see if Johnnie Y. is able to be up after a siege of bronchitis. Two of the other children must be inoculated with typhoid vaccine as there are many cases of the disease in the town. There are no other sick missionaries to visit, so I go over and see how bossie is getting along. (It is the doctor's job to look after all the pets and other animals of the missionary, as well as the missionary himself.)

It is nearly nine when the hospital is reached. Dr. Anderson has already held the hospital prayers, so while the operating room is being made ready for the first case, the wards are visited and directions left for the nurses.

The first case in the operating room is a farmer who has a needle in his abdomen. The native doctor, in poking around in the old fellow's stomach to make an exit for the spirit that causes pain, lost his needle, and the farmer wants it removed. The needle is found in the

deep muscles, the abdomen is opened and an ulcer of the stomach excised.

The second case is an old lung abscess that has been draining a long time, and the patient's body and clothes were in an awful state. The natives do not know modern surgical methods, so we get many cases of this sort. Next is a little boy with tuberculosis of the spine. The parents claim that an evil spirit in revenge blew his breath on the little boy's back when he was asleep, because his father, while drunk, offended the spirit in his sacrifice.

It is eleven and the operating room is yielded to Dr. Anderson. There are now some special cases in the dispensary. The first is a little eighteen-months-old girl, who while running naked around the house, backed against and sat down in a fire-pan. The wound has gone for four days and is very dirty and angry looking. Some skin grafting must be done later. There are very few Korean children who do not have burn scars. A case of incipient smallpox is sent in a hurry to the Government Isolation Hospital as we have no room for one. How we protest against going! There are a number of abscesses, cuts, sore eyes and coughs to be treated, a mastoid and several middle ear infections are referred to the afternoon clinic, and it is time to go home for lunch.

On reaching home, a walk of nearly a mile, my wife says that Dr. S. called up and said that he couldn't run his Ford, which his home church has just sent out, and wants me to come over and see if I can find the trouble. (The doctor is community chauffeur. He has a license but no car!)

At the afternoon clinic we fixed up the ear, removed a tonsil, and cleaned out the mastoid. Then home again. . . .

After supper we have a good romp with the children, and then see what is new in the medical journal.

Here is another glimpse of daily work from Dr. Marian Moore of North India, during the cold season when she and her husband go into camp and tour among the villages.

North India is cold of nights during these three months. The early comer may find our patients huddled in the sunny patches between the mango trees of the grove where our tents are pitched.

Mothers are here, with children all unwashed and unfed, ready for drops in eyes, or quinine for malaria. A series of infections gone bad awaits assorted turns with a bowlful of hot disinfectant, and fresh dressings. (Thanks to a boxful from home!) Crushed fingers, thorn-infected feet, skinned toes, and at this season a procession of burn cases. A fire in a mud brazier, a shivering, huddling child in an old cotton cloth—and we have days of anxious and painful dressings, to prevent searing and deformity. How we bless you at home for supplies of cloth—soft wrappings for these agonizing surfaces.

The malnutrition series seems more numerous than ever this cold season. The mango crop failed last summer. Nothing else supplies the vitamine thus lost. Bricks without straw, bones without calcium, tissues without strength—soil for the quick growth of the germs which the tubercular grandmother expectorates about the mud house.

Old men sit in a gleaming group, rubbing oil liniment into their aching limbs, in the sunshine, grunting with appreciation. The castor oil spoon is scoured with a handful of earth, and washed, and then the compounder (druggist assistant) holds the arms and legs and nose of the next recipient. It is the one fluid which, without exception, fails of appreciation. And, alas, cod liver

oil is another, and would be so helpful if only it would stay down!

One baby wears a necklace of burrs—to save its eyes! The mother explained that she was too busy to bring the child every day for treatment—half a mile to our Dispensary tent. Besides, his eyes had been swollen shut for a month, so she felt she must do something!

One never knows what a day will bring forth, but only that as one's day is, so one's strength will be.

A gallant medical work is being carried on under far more primitive conditions among the Igorot tribes who live high up among the mountains of northern Luzon in the Philippine Islands. Before the Americans came to the Philippines no one paid any special attention to these uncivilized little people. Now, with the town of Sagada as a center, a great variety of Christian work is being carried on among them, including a small hospital in charge of Dr. Hawkins K. Jenkins.

This hospital has to battle with all sorts of difficulties. The people are scattered and are very poor. It is as hard for them to bring in their sick over the steep trails as it is for them to pay the doctors anything for treatment. One patient, on leaving the hospital, presented Dr. Jenkins with an egg. The man's three words on departure, were "Sir! Egg! Good-bye!" To him an egg meant a fairly good payment.

The work of this hospital is constantly hampered by lack of space and shortage of money. Dr. Jenkins gives a picture of the patients in their cramped quarters. In the one small ward was a woman with a baby boy, seven months old, with a temperature of 105

degrees who had been suffering from acidosis and abscesses in both ears. In the same room was another mother and her new-born baby. She had been carried in on a bamboo stretcher by four men, over a mountain trail, a four-hour trip. Still another occupant of that room was a woman critically sick with malaria, who was almost too weak to move. A fourth patient had bronchitis. The doctor would have liked to separate some of these patients, but there was no space. Even the hallway and attic each contained a patient.

The operating room is a rough affair, in a building which was never intended as a hospital. There is no electricity and lamps have to be used for night operations.

So here again you have pioneer conditions, though not so very far from Manila, with its fine modern hospitals. Yet, for all its inadequate size and equipment, this center at Sagada, through its clinic and hospital and the visits of its staff over a wide surrounding area, reaches some twenty thousand people each year.

There is no magic in being a medical missionary. There are the same problems and difficulties in treating the sick in distant lands as anywhere, and these are peculiar to the place and people. We know that doctors don't make every one well here; nor do they over there. They get just as puzzled out there over some of their cases as they would if practising in America or Europe, perhaps more so, because so

often they work alone and do not have our specialists, laboratories, and hospitals.

Sometimes their trials are due to the superstitious beliefs of the people. Patients may have had very harmful treatment at the hands of ignorant persons before being brought to the hospital. For example, mud may have been rubbed into a wound. Sometimes the trouble comes because the doctor's instructions are ignored. A good example of this last difficulty comes from a doctor in Abyssinia, that ancient, semi-Christian kingdom tucked away on the high plateaus of northeastern Africa.

Dr. Stuart Bergsma, whose hospital is located at Adis Ababa, the capital, tells of an old man with a broken leg which the doctor had set and put in a plaster cast. Two days later, and long before the patient should have left the hospital, his family came and insisted that he should go home. Dr. Bergsma strongly advised them to let him remain until the leg had healed. When they kept on insisting and finally took the man away, Dr. Bergsma carefully warned them to bring the man back to the hospital to have the cast removed.

Three months later the patient returned in a most disappointing condition. His leg had knit together, but was wretchedly crooked. When Dr. Bergsma asked what had been done, the old man's relatives replied, "Yes, we removed the cast on the same day that we took him home. We broke it off with an axe. We wanted to see how the leg was getting along. And

would you believe it, the minute he walked on it he had a great deal of pain, and his leg became crooked as you see it now."

I might add that the king of Abyssinia has depended greatly on the Christian doctors of this hospital and he appreciates the work they are doing for his people. He has made gifts of land to the mission and shown his confidence and favor in many ways.

Most mission hospitals are small, as compared with the average hospital in the United States. From twenty to sixty or seventy beds would be the size of the large majority of them. Only a few have over one hundred beds. But, of course, the usual Western practice of estimating the size of a hospital by the number of its beds does not apply in the Orient and Africa. In mission hospitals the number of beds is very elastic. If crowded by patients, there may be makeshifts. In many Oriental countries people prefer to sleep on the floor, and the patients follow this custom. Some of our patients in Persia used to complain that our spring bedsteads and mattresses were too soft; they wanted to lie on something harder. Once or twice I actually placed boards between the mattresses and the springs, so as to make the beds harder and the patients more comfortable! One of my friends from Africa, Dr. J. C. King, whose work is in the Belgian Congo, told us at a medical conference that his hospital had an upper and a lower ward. The upper ward was on top of the beds; the lower was under them.

Many mission hospitals now have substantial buildings of good brick or stone—occasionally of concrete, but many are still simple and primitive, of wood or sun-dried brick, or even bark as in Africa. Few mission hospitals have X-ray equipment, but a great many more have it now than did ten years ago, and they are getting better equipped all the time.

In general, the mission hospitals do not have the conveniences of Western hospitals. Some have running water and others don't. Some have electric lights, but many still use kerosene lamps. Some have modern sanitary facilities, while others do not, and where they are lacking difficult problems arise. Comparatively few mission hospitals, taking the world as a whole, have telephones, though they are increasing right along. I know of only a few with that luxury—an ambulance.

All this means that the towns and cities in which the hospitals are located are also lacking in such necessary conveniences as plumbing and sewer systems, electric power and telephones. But such improvements are being steadily introduced. In many places what is true today will not be true five or ten years from now. When it comes to operating rooms and instruments, even though these are not elaborate, I think they come somewhat nearer to what we would consider an adequate standard. The mission doctors can and do perform a great variety of surgery with success.

The fine thing is that in spite of limitations and

difficulties there is such a lot of thoroughly good work being done. Dr. Mary James of China, after describing some of the handicaps and shortcomings of the hospital which she has successfully conducted for many years, goes on to say:

To run now from our needs to what we really have, let me tell you about the sunny children that crowd three rooms of our primitive hospital. Many of them are little cripples with tubercular bone diseases who must spend long, long months, or sometimes years, lying flat on their backs, with weights attached to their legs. We have had Bradford frames (a sort of canvas stretcher with iron rims) made for them here in China, and every good day we carry them out into the little courtyard in the center of the hospital. The nurses have learned to give them such care as one might be proud of even in America.

I have never seen a happier set of children than our little cripples. They are fond of the nurses, always ready to respond to our advances or to those of visitors, and eager to learn anything and everything. The Bible woman gives them regular instruction in reading their own language, and also teaches them Bible stories and the simpler doctrines of the church. Anyone who will teaches them hymns. In these they fairly exult. Should you visit our children's wards you would probably find yourself compelled to stand and listen to all the verses of "There's a Friend for Little Children," "Oh, Come, All Ye Faithful," or some other of their favorite hymns. But not all our children are cripples. Many come in with acute diseases, and these, too, soon respond to the spirit of cheer in the wards.

It is heartening to see how some of the helpers and associates in a mission hospital catch the spirit of de-

votion, self sacrifice and courage which is part of the Christian ideal. Let this story I heard in China of the faithfulness of a servant close this chapter on the life of a Christian hospital.

The splendid Yale-in-China hospital, far up the Yangtse River in the troubled province of Hunan, was one of the few that escaped destruction in the communist drive of 1927. But it narrowly escaped being looted, for the communists were out for everything they could get. The fat loot of a hospital had its lure; but they needed this one at Changsha for an army base hospital. So, for a time at least, it was to their interest to use it well.

When the forces of the national Chinese government from Nanking pressed up the river, the communists were beaten back. The day came for them to evacuate Changsha. "At least," they thought, "we will carry off the equipment of the fine operating room." They detailed a coolie to gather up the operating room instruments into hampers to be carted off. This job required his going back and forth from instrument room to operating room while he packed the instruments.

Now it so happened that the regular operating room coolie was a faithful old soul who couldn't allow all those hundreds of dollars' worth of instruments to be stolen before his eyes. So he took his courage, and very likely his life, in his two hands, and started a little counter move. As fast as the communist packed instruments into the hampers and went out for more,

he deftly shifted them elsewhere and piled in some junk or other in their place. So it went on, back and forth, the communist steadily stripping the instrument cases, and the hospital coolie quietly doing his double shift act. Finally the loaded hampers were carted out as the communists departed hurriedly ahead of the victorious Nanking troops. Not till too late, however, did they open up their hampers and discover their choice assortment of junk. All those instruments are doing duty today in the great Yale-in-China hospital. That operating room orderly, I claim, was a real man.

Here we have seen the hospitals and doctors at work, the problems they face in their daily service, and the response of the people to these efforts. But perhaps the question comes up as to whether something could not be done to prevent all this suffering and misery, as well as care for those who are already in trouble. This is a fair question. Let us take it up, and see what is being done.

Chapter Six

PREVENTION IS BETTER THAN CURE

"ARE the rats falling?" inquired Dr. Robert Goheen, when he returned to India from furlough in America. The question was asked of the mayor of Vengurla, a town on the west coast, south of Bombay, where Dr. Goheen is in charge of a Christian hospital. "No," said the mayor, "they are not falling this year." Much relieved at the news the doctor plunged into his regular hospital work.

Maybe the question of whether the rats are falling or not does not mean very much to you. But it is a tremendously important question in India and some other countries. Rats are the carriers of plague, one of the most terrible epidemic diseases of the world, that means almost sure death. But the plague is really transferred by fleas which live on the rats. When the rats are falling and dying from the plague, the fleas leave the dead rodents to infect humans and cause an epidemic of the disease. The rats are the barometers of plague, as well as its spreaders.

Dr. Goheen had not been back at this work very long, however, before he began to hear from patients and neighbors that dead rats were being found. The people were getting worried. An epidemic was evi-

dently starting, and there was no time to lose. If it could be checked at once, hundreds, if not thousands, of lives could be saved. What was he to do?

Fortunately the method of fighting plague has been simplified by modern medical science. Aside from isolating individual cases, there are two main things to do: give preventive serum injections, and exterminate the rats.

The first calls for an intelligent community which will come for injections, as well as a trained staff to give them and money to pay its salary. Vengurla was short on all these requirements. Therefore it was of the utmost importance to kill the rats, and quickly! The municipality of Vengurla, as soon as it was made to realize the situation, asked Dr. Goheen to take charge of the campaign. He sent immediately to the government health department at Calcutta for rat poison which is put up in convenient and delectable morsels for just this purpose. This much was fairly simple, but the distribution of the poison in a superstitious community, without any local health force or other adequate staff of workers, was a problem. For the Hindus and other religious sects, excluding the Moslems, are taught that they must not take the life of any living thing, not even a dangerous animal or reptile. There was no volunteer response to be expected from the town at large. And the small mission hospital staff could not possibly handle it alone.

Dr. Goheen now hit on the idea of getting the young schoolboys interested. They were less superstitious. He went to one of the local schools, next to a rival school, and then to still another rival school, explaining and appealing to each of them. It was rats or people. Kill the rats or be killed by the plague. Here was the poison, and with it a fighting chance—a race for life. It was a matter of placing the poison in houses widely and thoroughly. Would the boys help? Would they! They responded with enthusiasm!

The rival schools were organized into teams to work on a competitive basis. And they went to work with a will.

Result? In a very few weeks the incipient epidemic was cut short. The rats were killed before they could carry the plague. Vengurla had won. Not a new case developed after the job was done. And all because there was on the spot a Christian doctor with the necessary knowledge, imagination, and ability to get a job done, and because those young students broke through their traditions and responded to a challenge.

Now think for a minute what this experience will mean to those boys! They have had an exciting part in stopping a frightful danger to their town and their homes by the use of scientific measures. They won't forget the lesson. My guess is that for many of them it will be a life event, a landmark in their education. Let your imagination follow through. What is

going to happen the next time there is a plague or cholera or smallpox epidemic? Will they all fall back on the old superstitions again? When grandfather says, "Son, the evil spirits are sending us the black scourge, hasten down to Krishna Gokhale's shop in the bazaar and buy a chicken to sacrifice to the god that we may be saved," do you suppose the grandson, whose school had a notable part in the great plague battle of 1930, is meekly going to trot down to Krishna Gokhale's shop to buy a chicken for sacrifice? Or do you suppose he is going to question the idea, and perhaps even have spunk enough to say politely and respectfully, "That used to be the thing we did. But it is old stuff. Besides, it never worked. We in school are learning better now. We must go to the health department and the doctors." It takes time to change people's thinking; but one demonstration like that at Vengurla speeds up the process.

Prevention of disease and a positive health program are vitally important. We shall always have sick people, and we shall always need hospitals. But we should try to lead the way in keeping people from crashing over the cliff, as Dr. W. W. Peter of China puts it, instead of merely waiting to pick up the mangled pieces at the bottom. There is so much that can be done by simple preventive measures. Clean food, clean water, clean houses, clean surroundings, and serum for such diseases as can be inoculated against, will go a long way to increase the happiness

and usefulness of India and China and Africa and many another country.

On the plateau country above Vengurla is a town called Miraj, with a famous mission hospital. The motor ride up from Vengurla, which is at sea level, to the railroad station at Belgaum presents some of the most magnificent panoramic views I have ever seen. You look out from the winding road which ripples around the precipices, over miles and miles of tumbled hills and valleys and green jungle to the sea—the Indian Ocean. Those deep jungles are tiger country, and if one is sufficiently enthusiastic to sit in a tree and shiver and take a chance on malaria or pneumonia for part of a night, he may be rewarded by a shot at my lord the tiger. Occasionally at dusk a tiger is glimpsed crossing the motor road.

The hospital at Miraj was founded by the great surgeon Dr. William Wanless, who on his retirement was knighted for his medical services by King George, and in the remaining years of his life was known as Sir William Wanless. When he died early in 1933 newspapers all over the world noted his remarkable life work and cited the fact that in the Miraj hospital he had treated more than a million patients and had restored the eyesight of twelve thousand persons. Dr. Charles E. Vail, his able successor, carries on as head of this large institution.

Dr. Vail, by the way, is a famous tiger hunter. He has spent some of his short holidays shooting tiger,

leopard and panther. He has gained such a reputation as a sure shot that frequently a village which has a pet marauder—a tiger, let us say, that is eating cattle and people—sends an S.O.S. to Dr. Vail. Sometimes they don't have much of a tiger, but they want Dr. Vail to see some patients, and knowing how busy he is in the hospital they think that perhaps he is due for a day off, and that the promise of tiger will surely bring him to their section. Dr. Vail has had to learn to be a bit wary when he hears tempting stories of large man-eaters to be hunted at some village or other.

What I really started to tell was that the people of Miraj also witnessed a great demonstration on plague prevention a year or two ago. An epidemic was upon them. The hospital offered anti-plague inoculations. But only the Christian part of the community responded. The Hindus preferred to depend on their old charms and sacrifices. The result was a striking difference in the number of cases of plague between the two groups. The local saying was, "the Christians do not catch plague."

If you want to get an idea of why it is important to teach people of backward countries about hygiene and sanitation, just read this from Burma:

There is a great deal of the amoebic dysentery. They say that the Chinese drink tea almost exclusively. That is probably the reason why there are so everlastingly many Chinese still alive. Our Burmese are not so particular. They drink anything that seems to be water, and it is

often muddy and always unfit to drink. The little streams which they lead into their villages to supply them with water all have their source near some mountain village, so that they are practically the sewers of those higher villages. . . .

In a section where there are no such streams, reservoirs are constructed. In order to waterproof them, cement not being available, the people wait until the first days of the rainy season when the ground is very soft and moist. Then they drive down a herd of water buffalo which are ridden round and round the reservoir until their feet have churned up the surface of the ground into a thick, slimy, nasty, vile-smelling mud. The rain-water collects here for the four or five months of the rainy season and supplies them with water for the remainder of the year. They bathe beside this reservoir, wash their clothes in it, drive down their animals to drink, and then take buckets of it back home to use in cooking.

But conditions are similar throughout the Orient and will remain so until education teaches the people better. For example, there is a prevention story behind this telegram which came to Dr. W. W. Peter in Shanghai: "Foochow was an island of safety in a sea of danger. Thanks." It referred to a strenuous medical campaign to save the great city of Foochow from a devastating epidemic of cholera, and had been sent to him in behalf of half a million Chinese and scores of foreigners.

Whenever an epidemic broke out in Foochow, the city was fairly panic-stricken. Cholera is a frightfully rapid and fatal disease. People who are walking around perfectly well in the morning may be dead

by evening. They fall down stricken in the streets. For ignorant and superstitious people cholera is particularly terrifying and overwhelming. They know of no way to deal with it—no preventive, no cure. There is a good modern treatment for it, but in the great cities of Asia the doctors are far too few to take care of all the stricken thousands. And, anyway, the thing to do is to try to prevent the spread of the infection.

During these epidemics people died so fast in Foochow that the supply of coffins gave out. Shops were closed because everybody in them had died. Ships stopped coming into port. The business of the city was fairly paralyzed. The people sought every supposed help they knew about. They consumed quantities of worthless old-style Chinese medicine. They flocked to the temple to burn incense and implore the gods. They had idol processions daily through the streets. But still the cholera would rage.

In the midst of all this misery and tragedy there finally appeared one bright spot—a cholera hospital was opened by medical missionaries aided by Western trained Chinese doctors. During the next visitation of cholera over nine thousand injection treatments were given here, and with such success that the influential men of the city took note of it. When the epidemic had run its course, having killed its thousands upon thousands, these leading men came for advice on prevention of its next visit. The result was that a group of medical missionaries and modern Chinese doctors was called together to draw up a plan. They

sent a committee to Shanghai to consult with Dr. Peter's organization, the Council of Health Education. At this conference it was decided to conduct a great educational campaign a week or ten days ahead of the time that cholera might be expected to break out again the next summer, for it usually came at that season. In the absence at that time of any government health department, and in view of the prevailing popular ignorance, it would be necessary to educate the people, and to teach them simply and definitely.

The campaign was carefully prepared and then begun in June. In one week 247 meetings were held to advertise cholera prevention. By actual count 110,000 people attended these meetings. A huge cholera parade was held, visualizing the right and wrong ways of handling food and disposing of garbage and sewage. Three hundred thousand pieces of literature were distributed. To do all this, a small army of volunteer workers—2,480 persons—mostly students, had been organized. The cost of the whole campaign was less than $2,000.

Well, what happened?

When the time for the usual epidemic came, there was cholera north of Foochow and south of Foochow. On the island of Formosa, just across the straits, there was cholera. Inland from Foochow there was more cholera. But Foochow was spared. A few cases came in from outside, but there was no epidemic. Scientific knowledge, cleverly spread by propaganda, had triumphed. No wonder the grateful people of Foo-

chow sent that interesting telegram, "Foochow was an island of safety in a sea of danger. Thanks."

What a splendid illustration Foochow gave of timely prevention!

Dealing with masses who could neither read nor write, Dr. Peter effectively used pictures, charts and lectures in his prevention campaign. One of these series of pictures showed the danger from flies as carriers of typhoid, dysentery, and other diseases, as well as cholera. The first picture was that of a huge, magnified fly. A fly really looks quite terrible when shown in enlarged form. One Chinese woman who had listened to the lecture was heard to say as she was leaving, "Well, of course, if they have tremendous flies like that in America, no wonder they are afraid of them!" This series of pictures continued with various scenes in which the fly was shown spreading disease. In the second picture the fly was contaminating a bowl of rice, which is the staple dish of China. In the third a man was doubled up with colic. After this came the doctor standing at his bedside. In the final picture the patient is being carried out dead. The moral was explained by the lecturer who interpreted the pictures. This sort of pictorial teaching slowly registers on illiterate and simple people. One can't expect too much at once, but little by little the points get across.

There is no telling where and how such propaganda bears fruit. Dr. Peter said that, some years after he began employing pictures and charts, he was visited

by a young Chinese doctor who was a stranger to him. This young man told the doctor that about fifteen years before he had seen one of his health exhibits in Shanghai. He had been deeply impressed with what it showed of the needs of China and of what modern medicine could do, and he thereupon decided to study medicine. And here he was, after all those years, a well-trained doctor, going back to serve his country.

There is, of course, a great difference between diseases. For some there are definite methods of prevention; for example, vaccination for smallpox and injections for diphtheria. For others, tuberculosis for example, there is no absolute or definite method of prevention; it depends on a number of things—good food, fresh air, sunlight, and general healthy living. There are many diseases of the first kind which cause an enormous number of preventable deaths in the countries of Asia and Africa. A few years ago the figures for India showed that in the previous decade nearly two and a half million people had died from plague and over three million from cholera. Both these diseases fall within the class of those that are definitely preventable. And consider these figures also from India: from fevers of a number of kinds, especially malaria, there were over fifty million deaths in the same ten years! It is as though two-fifths of the population of the United States had died from such causes in the last ten years!

As we have already seen, one of the important

places in which to get across the idea of community health is the mission school. Sometimes one particular disease which is prevalent can be taken up by itself and emphasized. This letter tells how a contagious disease of the eyes was treated in a mission school in South America:

Trachoma was present in an alarming percentage in the boarding school. An intensive campaign was begun, training the pupils to give the actual treatments. In two months the majority were free from the disease and by the end of the year, only one was under treatment. Over 150 village patients came in for treatment. All were advised to bring a relative to learn the intervals for inspection. The idea worked well. Twenty school pupils, nine persons from villages and thirty from the open country were trained to give this treatment. Thus a mission school became the home base for an effective public health measure in Brazil.

What would most of us think of making regular payments to a doctor to keep us well? In one place in Syria this form of prevention was actually started some years ago and is succeeding. A group of villages are following a local health insurance plan. It came about through an enterprising young Syrian doctor, Dr. Ma'touk, a graduate of the American University Medical School in Beirut. He did some figuring on the amount of sickness in his village and on its cost to the people. Then he made a proposal to each family. "You pay me a certain sum each year," he said, "and I will take care of your family for that." There was to

be no additional charge when illness came. And the amount to be paid for the year would depend on the income of the family. Quite a novel idea!

It worked well both ways. The people paid an annual sum, just after harvest, when they had cash in hand. The rest of the year they had no worries about the doctor's bills, and could call him as often as they liked. It worked well for Dr. Ma'touk, too, because he had a definite income, and no worry about bills and payments the rest of the year.

Perhaps you think he would be overrun with calls for all sorts of small ailments, and at first it began to look like that. But he was able to educate the people in two ways. One was in preventing those diseases for which inoculations could be given. And the other was in teaching people to care for small matters themselves, such as giving first aid in accidents and taking quinine for mild cases of malaria.

He carried on a thorough campaign against smallpox. So, although there was a big epidemic in the vicinity, none of his villagers died from smallpox. This health insurance plan has grown so fast that when I recently heard from it twelve villages and six hundred families were under Dr. Ma'touk's care. The net result is that the people are in better physical condition. They pay less than they used to pay under the old system. Yet the doctor has a satisfactory income. And everybody is well and happy.

Dr. Ma'touk had his training at the American University in Beirut, Syria, from which hundreds of

young doctors have gone out to Syria, Arabia, Mesopotamia, Palestine, Egypt, and other countries. Several of them are now in the hill country of Syria carrying on similar schemes. The plan works better where the people are educated enough to read and write and have some general knowledge than it does in the very ignorant or backward villages.

In Siam Dr. James W. McKean of whose work for lepers we have already read, was a pioneer in public health service. Smallpox used to be a common epidemic. Vaccination against it had already been started by others, but it fell to Dr. McKean to first develop it on a large scale. To begin with, there was no vaccine for him. He had to make his own from seed vaccine sent from London. The seed vaccine had to come in mail sacks on men's backs from Rangoon in Burma—a two weeks' trip—and it had already had a two months' trip to Rangoon from London.

Vaccine has to be made from the lymph of an animal, usually a calf. It was an exciting time when the first Siamese calf was made ready for implanting the seed vaccine. It was still more exciting when the first little blister-like eruptions appeared, indicating a successful take. The next chapter was a sad one. The precious calf somehow got tangled up in his halter and hung himself. Not so good! But fortunately enough lymph had been scraped off to keep the vaccine going. Another calf was used, and presently there was plenty of vaccine for a good start.

Dr. McKean then went to work to develop a staff of men who could go out into the villages and give the vaccine. There were between a hundred and two hundred of these. They were given a very careful course of instruction and then sent out with a supply of vaccine. They were allowed to charge a small amount for each vaccination, part of which was their pay and part of which was turned in to pay for the vaccine. Intanon, the old king, gave Dr. McKean exclusive vaccinating rights for the north. This would insure the use of safe vaccine and its proper administration by the vaccinators. Thousands of vaccinations were performed every year. After about ten years the Siamese government began to make its own vaccine and passed a law for compulsory vaccination. Dr. McKean's laboratory then became unnecessary; and he discontinued it.

Dr. McKean tells me that the real beginning of vaccination in Siam was made by Dr. D. B. Bradley of the American Board of Commissioners for Foreign Missions, early in the last century. In those days scabs from vaccinations were often used by doctors as vaccine. Dr. Bradley wrote to a doctor friend in America, who sent him a scab imbedded in a piece of wax. The sailing ship on which it was sent took months to reach Siam by way of Cape Horn. But the scab was still "alive" when it got to Siam.

The Siamese people were quick to appreciate the value of vaccination, although it took sixty years for the government to take it up officially. Now the Sia-

mese are said to be the best protected against smallpox of all the peoples in Asia. Medical missionaries began it.

Whether it be in such work as Dr. Agnes Fraser's in Africa, or Dr. Robert Goheen's in India, or Dr. W. W. Peter's in China, the idea of prevention is taking hold. It took a long while for this idea to grow in America and Europe, as one can see from accounts of epidemics of cholera in New York only a hundred years or so ago, and of the plague in England before that. Things were just about as bad as they are now in China or India, and in some ways worse. Later came the scientific discoveries in medicine that made prevention possible. Medical missions have done a large part of the pioneering necessary to carry the results of these discoveries into the Orient and Africa and Latin America.

Whether it be in caring for the sick, or in preventing sickness, the foreign physicians cannot hope to accomplish the whole task. Not only are there too few of them, but it is not a wise policy to make the peoples of these countries wholly dependent upon foreign doctors and nurses. It is much more practical and creative to help these underprivileged countries to learn to care for themselves and meet their own problems. In other words, they should be training their own doctors and nurses. What are medical missions doing toward solving this important problem?

Chapter Seven

DOCTORS OF THE FUTURE

"AVISON," said a prominent doctor of Toronto, Canada, "you are a fool to go out there to Korea and bury yourself. What can you do with all those millions of people?"

Young Dr. Oliver R. Avison had graduated from medical school in Toronto six years before, and was an instructor on the faculty. There was every prospect that a man of his promise would forge right ahead to high standing among the doctors of Toronto. Yet he was giving it all up and going out to a queer, out-of-the-way, down-at-the-heels little country that you had to hunt for on the map to know just where it was.

"Well," said Dr. Avison, "I can't take care of very many myself, of course, but suppose I train some of the Koreans to be good doctors and send them out to work for their own people. Wouldn't that be something?"

The Toronto doctor considered a moment and said, "Yes, that's different. If you multiplied yourself by turning out a lot of well-trained young Korean doctors, it might be worth while."

That conversation took place about forty years ago. Dr. Avison, who is still in Korea and very much alive, is head of one of the great medical schools of the Far East—the Severance Union Medical College at Seoul, the capital of Korea. Hundreds of full-fledged, well-trained, Korean doctors have been graduated from that school. And they are at work all over Korea, as well as in more and more important positions in the Severance Medical College itself. In 1931 there were two hundred and fourteen applicants for the forty places that are open each year in the freshman class. That is all the college can handle with its present space and equipment, so it selects its students very critically and takes only the most promising young men. Such a policy promises far-reaching results in the future.

Incidentally, there have been striking recognitions of Dr. Avison's influence and position in Korea. The alumni of the college have set up on the campus a fine statue of him. I was much interested to see it when I was there. Not many men have statues of themselves erected while they are still alive. It shows something of what this school and its founder have meant to Korea. Dr. Avison was decorated by the Emperor of Korea, in the days before the country became a part of the Japanese Empire. And after the Japanese assumed control there was another distinguished decoration, this time from the Emperor of Japan. In both instances the reason for conferring the honor was stated as "recognition of the work done by

Dr. Avison along the lines of education and social service."

One of the pioneers and leaders in medical education for women is Dr. Ida Scudder of India. She comes of a great missionary family. But, when a student in America, she had no idea of going back to India. When people asked, as they would, whether she was going to India she would say: "No, I'm going to live in America. There are enough Scudders in India."

Then it came about that she went out to India on a visit, because she was needed to take care of her sick mother. She fully intended to return to America after her mother recovered. Katharine Scherer Cronk has told the story of the change in Ida Scudder's life plans:

One night she sat in her father's house in India. As the dusk of twilight was deepening into night a knock sounded at the door. The girl answered its summons. A man stood before her. He was a high-born Moslem, tall, slender, white-robed. He bowed low and spoke.

"My young wife is ill, ill to the death. Our doctor can do nothing for her. Will the gracious lady come to attend her?"

Ida Scudder knew naught of medicine.

"My father," she answered eagerly, "is a medical man. He will come to see your wife."

The Moslem drew himself up proudly.

"No man has ever looked upon the face of my wife. We are high-born. I should prefer a thousand times that she die than have a man look upon her face."

Proudly he turned and went into the darkness.

Ida Scudder sat down and thought. She was in India now. In India with this pitiful, unpitied child wife, who might be dying even as she sat and thought of her. How long she sat, she did not know. She was startled by a second knock. Possibly the man had been softened by the sight of the agony of his little wife and had come for her father. Eagerly she opened the door. It was not the same man who stood there. Possibly it was his messenger.

"My wife," began this man, as had the other, "my wife is very sick. She is giving me much trouble. It is a pity that a wife should give her husband so much trouble. After all my pains she may die unless the Miss Sahiba comes and heals her."

The girl looked at him hopefully. "I'm not a doctor," she explained, "but my father is a medical man. He will—" The man interrupted her with a proud uplifting of his turbaned head.

"I am a high-caste man," he said. "No man dare look upon the face of my wife."

Even as he spoke he turned and disappeared in the darkness.

Ida Scudder's thought went with him back to the girl. Perhaps she was only a little girl. So many of them were. Perhaps she was dying even now because no man would be allowed to help her, and there was no woman to help. Something clutched at the heart of the American girl and choked her as she sat helpless and unhelping. It was terrible that two calls should come in rapid succession on the same night. As she shuddered at the thought and the misery of it all, a third knock sounded. A third man came before her. His voice was almost eager.

"My wife," he said. "She is ill, very ill. They told me I could find help for her here—a wonderful foreign doctor who has done remarkable things."

At last there was a call for her father.

"Oh, yes, I will send my father," she answered gladly.

The man involuntarily straightened himself.

"Not a man! You must come."

In vain did the girl plead to have her father attend the suffering woman. Sadly and alone the man departed as had the two other men before him. Ida Scudder sat down again. Were all the suffering child wives in India calling to her that night?

The night passed on. The day dawned. Ida Scudder summoned a servant.

"Go," said she, "inquire after those who called last night."

Soon the servant returned with his message. He bowed low before the American girl as he spoke.

"Dead, Miss Sahiba!" he said. "All three of them are dead!"

Almost in touch of her hand they had died down in the village! Then, in the quiet, God's voice sounded a call to her. She understood now why her mother had been willing to go back to India. She sought her mother's room.

"I am going to America, mother," she said simply, "to study medicine. And then I'm coming back to India to help."

On the register of the students entering the Women's Medical College of Philadelphia that fall Ida S. Scudder's name was entered. The call of India's need was on her heart as it had been on the hearts of her mother and father.

The years passed. To the gate of a hospital at Vellore, India, a messenger came one night and a knock sounded. Again there was a call for a doctor. This time Dr. Ida Scudder answered it with joy. She went with the messenger and two lives were saved that night. Even as she returned, another call came. Eagerly she went the second

time on her life-saving mission. Before she reached home the third call followed her, and she turned once more to help.

"They live!" she said, tired but triumphant in the gray dawn. "All three of them live! I have answered the knocks in the night that have been sounding in my ears."

A peace that passed all understanding filled her soul.

Year after year she answered similar calls: and a busy, useful hospital for women and children grew up. But the calls were limitless. And she was just one person, tirelessly meeting all that anyone could; the need was certainly beyond the capacity of one person. She came to the same conclusion reached by other Christian doctors—that there must be medical schools to multiply doctors from the people for service in their own country. So Dr. Ida Scudder dreamed of a medical school for Indian women, and, what is more, worked at that dream. By and by, as more friends in America and England became interested, campaigns for money were put on, until a fine hospital was built and then, to crown it all, generous funds for a modern, well-equipped medical school.

In 1931 I was out there in Vellore and saw that splendid hospital and splendid medical school. I walked through the wards with Dr. Scudder and saw how those poor Indian women in the beds turned to her with the look in their eyes that I cannot describe. Then we drove out to the new medical school buildings which were nearing completion, and climbed all over them.

Even before the school had acquired these beautiful new buildings it had been sending out a fine body of women doctors to do the sort of Christlike service which the women of India need so sorely. And now, with the efficient new plant, the usefulness of the school will grow more and more.

Dr. Ida Scudder had a great vision. And it was thrilling to see that vision taking practical form. I wish I could help you to realize my impressions of that place. It is one of the finest things I have ever seen.

Another leading spirit for the training of women doctors in India is Dr. Edith Brown of Ludhiana, in the Punjab. Nearly forty years ago she saw what was needed to be done for the women of India. In 1893 she called a conference of women doctors in mission work. And the idea of a medical school was launched at that gathering.

In these days, when millions of dollars are being put into medical centers, it is surprising to read that she started with a little less than two hundred and fifty dollars for capital, and the promise of the same amount each year for five years! The first faculty consisted of herself and two others, who gave an hour a day. In the first student class only four enrolled.

Now there is in Ludhiana a flourishing medical school and hospital which I visited when in India. There are ninety-eight medical students instead of four, and about one hundred and fifty more who are

nurses, pharmacy students and midwives. Over eight hundred students, a hundred and ninety-two of them doctors, have gone out from that school. The students are Christians, Hindus and Moslems. Fourteen different languages are spoken among them. The spirit that one feels throughout the place is well expressed in the words of Lagwanti, a woman of the highest caste, a Brahman, who went there with a friend of her own caste who was a patient in the hospital. Observing the care and kindness shown to her friend she said to herself, "Great merit will accrue to these nurses for thus tending a Brahman." Then she began noticing that down the ward the nurses were giving just the same care to an outcaste. Weeks later, this Brahman woman wrote in, "I have come to join the Christian way. Your words about Jesus were good; they sat on my heart; but it was your deeds that made them sit."

The medical school for men at Miraj, which was started by Dr. Wanless and is now being administered by Dr. Vail, is doing a service for Indian men similar to that which these other schools are doing for the women of India. I wish there were space in which to describe its splendid work. The graduates of this school go out to all parts of India, and even outside India. When I was traveling down through Persia on my way to India, I reached a town called Duzdap, which was the end of the railway that runs from India across Baluchistan to the eastern border of Persia. Here I found a small mission hospital, and one of the graduates of the Miraj Medical School was in

charge of it. It was a fine thing to see this young Indian doctor, thousands of miles from home and the medical school that had trained him, carrying on Christian medical work.

In China there are six mission medical schools, scattered over the vast territory from Canton in the south to Mukden, away to the north in Manchuria, and then out in a far western province toward Tibet, at Chengtu.

The Hackett Medical School in Canton is for women. Some of the others are coeducational. The Chinese young women are keen students, and they are willing to go long distances to get a medical education. But it is a far more serious matter for a girl in a country like India or China to leave her family and undertake the study of a profession than it is in the United States or Canada, because it has always been their custom for women to stay at home and limit their work to household tasks. Little by little this old attitude is changing, as we have seen, and large numbers of Oriental girls are going to college and into professions.

One of the very interesting graduates of Hackett Medical School is Dr. Paang. When she was graduated, the faculty tried hard to persuade her to stay on as a teacher in the medical school. She was such a capable person that they felt they needed her right there. It would be a position with great possibilities of usefulness and a comfortable living in a big, interesting

city. Dr. Paang, however, had made up her mind that she wanted to go out into the neglected village regions, away from the city, to render her Christian medical service. She started in one of the outlying districts not far from Canton. From there she went to a mission hospital far in the interior, working there two years, until the hospital was closed because of political disturbances. Later, she and another graduate went into another remote country region and worked until disturbances also broke out there and forced them to leave.

We need to remember what courage and skill it requires for these young Chinese women doctors to go off into strange and sometimes dangerous places which are many days, or even weeks, of uncertain travel distant from their homes. It often means a bigger adventure, and it requires stronger purpose than for most missionaries to go from America to China. We are more or less accustomed to the idea of travel and have convenient facilities for it. But Chinese women are not accustomed to the idea, and frequently they are obliged to travel by slow and irregular river boats, or perhaps by sedan chairs carried on men's shoulders. In outlying regions these women doctors may be regarded as just about as foreign as we should be. So Dr. Paang's decision to do her medical work in the rural districts meant that she was putting aside all thought of ease or convenience.

Every now and then the papers mention something about the province of Shantung in China. It is one of

the most important provinces of China, and might be compared to New York State or Ohio or California in our country. The capital city of this province, Tsinan-fu, is therefore a place of influence. In Tsinan-fu there is located one of the splendid mission medical schools of China. Its Chinese name is Cheeloo. It was formed by the union of several small mission medical schools, because the missions thought it better to have one strong school than three or four weak ones. It is now a thriving coeducational institution with a flourishing hospital, a nurses' training school and various other activities. Its special aim is to prepare its graduates to go out in the spirit of Christian service to the small towns and country districts. It encourages them to do this instead of settling down in large cities to take up practice that might bring larger financial returns. Many Cheeloo graduates are in mission hospitals in different parts of China. When I was at Cheeloo during my trip around the world I was tremendously impressed with the spirit and the work of this medical school.

You might be interested to hear what different foreign doctors in various mission hospitals have to say about a few of the graduates of Cheeloo—both men and women.

One doctor writes: "I am so happy to add that Dr. Teng is making good in every respect. Never have we had anyone more acceptable or more capable. She has the right material in her make-up for a mission hospital: she is a sincere Christian and all know it.

I am leaving her in full charge while I make a week's trip and visit. The hospital is full of patients and the clinics are very large. Cheeloo can well be proud of having turned out such a fine woman doctor."

Another says: "Dr. Yu Tao Jung is doing fine work. The patients are increasing. He has one of the cleanest, tidiest, nicest places I ever saw. He is an earnest Christian. We are most fortunate to have him."

From a lonely place up in the country comes another tribute to a graduate of the Cheeloo medical school: "Dr. Yang is outstanding in his profession and character. He has a strictly Christian standard of honesty and straightforward dealing that command the highest respect. . . . He is superintendent of the hospital. The hospital has twenty-five beds, with a daily clinic averaging forty, and an increasing number of outcalls. There is abundant opportunity for developing an educational program of hygiene and general sanitation."

Doctors are much respected among the peoples of Asia. And they often have great influence in their communities. Men and women of real character, who are well trained in modern scientific medicine, are more and more in demand. They are tremendous forces for health and for good. Though there are other medical schools in the more civilized parts of the Orient, it is especially in the mission medical schools that Christian character is developed. After all, this is what India and China and Africa and Arabia need most of all.

Chapter Eight

TOMORROW'S NURSES

DAY after day in a little village a chair-bearers stood looking for the postman. Day after day the postman did not come. She was awaiting the receipt of her diploma, which would certify that she had passed the license examinations and could be considered a qualified and registered nurse. She had made a long, hard trip from her village to Foochow to take the examinations of the nurses' association. It was a three-days' journey, and it was through bandit country. But she was so determined to take the examinations, for which she had worked long and hard, that she decided to risk it. She had been carried by chair-bearers—one of the old modes of travel in China —and had managed to get through to Foochow. There she met more obstacles because the practical examinations were in a dialect different from hers, and she had trouble making it out. But she struggled through the examinations, and was again successful in avoiding bandits on the way home.

Now she was waiting for the report from Foochow, while not only days and weeks but even months were slipping by without a word. As a matter of fact, the mail was much delayed because of the upset conditions

of the country, though she couldn't be sure of this reason for the delay The people of the village began to make fun of her. They said that she had gone to all that trouble and paid out her money for nothing—that all the nurses' association wanted was her registration fee. She had been made a fool of, they said. It was pretty trying. She had nothing to show for all her work, and the anxious, empty months were going by.

Finally, one day the postman delivered the long awaited package. He had been badly delayed. She tore the package open, and there, inside, was the coveted diploma properly sealed and stamped. Not merely that, but she was told that she had passed with honors!

What a day of days that must have been! The village people turned right around and began rejoicing with her and congratulating her. They had feasts and celebrations in her honor, somewhat as they used to do in the old imperial days when one of the old-fashioned examinations for government office was passed by a local young student. It brought honor to the village. From that time on they came to her when they were sick, and her advice was accepted on all matters of medicine and hygiene. She was able to do a great deal in all that region for the health of the people.

You see, there is an official nurses' association in China, as also in India, very much like our nurses' associations in America and England. This association gives examinations, holds conferences and cir-

culates literature. The mission hospitals around the country train their nurses and send them to take these examinations which decide whether the girls have qualified to be registered nurses.

It is a great thing for girls in China, India, Korea and other Asiatic countries to be able to take up a fine profession like nursing. In the Orient there are not as yet very many careers open to women. But nursing is one of the best there is, for there are times, in a country where doctors are scarce or inaccessible, when nurses are almost as effective, especially in those Oriental countries where women are veiled or live strictly secluded lives.

In all sorts of places in Africa and Latin America and Asia, girls are struggling to get a nurse's training. They have seen it as an ideal through which they can serve. In the Near East I remember a girl, Abigail Shabas by name, who had been brought up in an out-of-the-way little mud-walled village where there wasn't even a school or anything remotely resembling a hospital. She had never heard of such a thing as the profession of nursing, but she had a natural love for looking after sick people. She would gladly go about in her village and take care of the sick, even though she had no training or equipment and had to depend simply on good sense and kindness. Later she went to a mission school, and about the time she was to graduate she heard that the mission hospital was going to open a nurse's training class. It seemed to be just what she

had always been waiting for and working toward. She applied right away, was accepted, and presently began her course. There were two other girls in the class.

Within the next year or so, the World War came down on that part of the Near East. Everything was torn up and knocked about. The regular classes were interrupted by emergencies and finally broken up altogether. But Abigail and the other two student nurses gained much practical experience. Wounded men were constantly being brought to the hospital, and there was a great deal of sickness. Finally, when the war was ended, the course for those three girls was resumed and at length they graduated. The graduation exercises were quite an occasion, with many notables in the audience.

Miss Shabas, always ambitious for the best, later on managed somehow to get to England. There she studied in one of the great maternity hospitals so that she might fit herself to specialize in the nursing of women and children. Her training over, she went to Baghdad and began to work as the first nurse in her particular field that that historic old city had ever had, so far as I know. Her work was tremendously welcomed by the people there. And she had years of very useful service. Now she has gone back to Persia —to the capital city of Teheran—to continue her work.

If you knew what it meant for a poor, uneducated, village girl in a backward Asiatic country to acquire these privileges, you would realize what a remarkable

thing has happened. With these difficulties in mind you can understand why nursing work in pioneer regions has been slow and hard. It is naturally made up of plenty of amusing experiences and disappointments as well as successes.

Dr. Gordon S. Seagrave, of Burma, after speaking of difficulties presented in their nurses' training school by the fact that the girls came from different areas and spoke different languages, writes:

We finally decided to use the Burmese language, for all these girls understand a little Burmese just as you and I understand French—you know how much that is. . . . So away we went with Burmese. And we got along very well indeed. You can imagine how well we got along if you think what it would be like to ship an American doctor over to Germany to open a nurses' training school, allow him to take in only French and Italian girls, and make him teach them in the Russian language. But, at the end of four years, we graduated one girl. . . . When this first Kachin girl graduated with high honors (she became an unusually fine nurse), the princes of the valley of Mong Paw, fifty miles away, heard about it and sent an embassy down to say that they would like her to come out to their valley to practise, as their people were entirely without medical assistance. It was arranged that she would go, on condition that they would build her a hospital. We supposed that if they built her a hospital it would be of bamboo. We were delighted, however, to see that they built her a hospital with wooden posts and a wooden floor.

Nurse Hkang Nang has been out in that valley for about one year, entirely without medical assistance except when she was occasionally able to send to my asso-

ciate such cases as she could not diagnose and treat. But, during the first six months of that year, she cared for more sick people—and cured them too—than I did in my whole first year in Burma. We feel that this nursing school is about the biggest thing we do. Every one of these girls must be a Christian; she receives a good deal of Bible instruction in either the Kachin or Shan schools, and after graduation is able to do remarkable work in the care of the sick of her own people. . . .

The nurses who graduate from mission hospital training schools have their difficulties, as they take up work among people who know nothing about modern nursing and doctoring. This means that the nurse really must do a great deal of educating. She becomes a teacher in the houses of the town or village where she lives. Here is a page or two from the diary of a Chinese nurse that gives an interesting glimpse into the kind of experiences that the girls meet:

My chum and I have been called on another case. A wealthy Chinese family has just telephoned, asking for two nurses to take care of a woman of the household. It was certainly fortunate that I happened to answer the telephone. Until the sedan chairs come for us there is time for a note in my diary. This is only my second case since graduating from Turner Training School at Hackett. I don't feel one bit nervous, but I suppose I shall when the family looks us over. If they are like most wealthy families there will be so many of them in their separate houses, connected by courtyards and passageways, that we may not be noticed. I hope the ancestral temple will not be near our apartment. Since I am a Christian, the smell of joss-sticks and the sight of food set before the ancestral tablets is depressing. It is typical

of the prevailing ignorance and superstition. The chairs have arrived. . . .

Bedtime. Our patient is a very sick woman, with high fever and delirium at times. It is very plain, from the absence of images in her apartment, that she is a Christian. That explains why a Hackett graduate was called to attend her when her baby was born a month ago. As soon as I had donned my uniform today I took the patient's pulse, temperature and respiration; bathed her with soap and water, cleansed her mouth, gave her some water to drink, combed her hair and arranged her bed. I am sure I made her feel comfortable, for she went to sleep at once. Several of the many women of the family watched closely all that I did. Among them, of course, was the first wife or mother-in-law, who manages the affairs of the house as well as all the people living in it.

When I was through, the mother-in-law said it was not necessary to bathe the patient with soap and water, as damp towels would be sufficient. She also said that I was not to give the patient any water to drink, as it would make her worse. I tried to explain to her how important water is. I told her that I had seen babies in the hospital that were almost dead come back to life in a few hours after being given water in large amounts. I explained to her how water alone saves the lives of patients with cholera. But it was no use. Then I asked when the doctor was coming, hoping that he would give the order and that she would believe him. But my heart fell when she said that they would send for two or three Chinese medicine men in the morning.

Two days later. The patient is no better and it has taken me all day to recover from the events of yesterday. Very soon after the morning meal the Chinese doctor arrived. He felt the patient's pulse to test the condition of the heart, then tested the other side at various levels

to discover the condition of other internal organs. Then he looked at the patient's tongue and eyes. After he had asked a few questions I saw he was ready to write his prescription, so I asked him quietly about giving water to the patient.

"Oh, no, no," he said, "water is not needed, not at all."

Just then there was a knock at the door and a bustle to get the doctor shuffled into another room. I looked around and another Chinese doctor came in. He made the same kind of examination and wrote his prescription. As soon as the prescription was received it was shown to the first doctor and his opinion asked.

"It is of no use at all," he said, "it will not cure her."

What could the poor family do but send for another doctor! True to Chinese style they did not stop at three, but, during that day, sent for nine different doctors. Each one of them made his examination and wrote his prescription, but there was no agreement among them. As there was no consultation their different pronouncements and medicine had little in common. None of them would attend to the kidneys or bowels or give fluids. Here I am helpless, and all I do is to make the patient as comfortable as possible and give her the concoctions which the mother-in-law brews by the hour over charcoal stoves in the kitchen.

Just think what they must have spent for doctors yesterday! Each visit would cost from four to ten dollars, depending on the reputation of the doctor. Then, too, they pay us nurses five dollars each a day.

Six days later. The patient is worse. Yesterday my chum and I became desperate and managed to get the family and all the servants to leave the patient's room long enough for us to give her some water and a real bath. She slept well afterwards, but her fever still continues high. Other Chinese doctors have come, but each new

one means only a new mixture to be brewed and a new medicine to be given. The patient has been calling for a Dr. Lee, a foreign doctor from the foreign community of Shameen who had attended her some years ago. The mother-in-law says this doctor is no longer in Canton.

Today, I told the family I would not stay longer; by staying on and giving only the medicine and treatment prescribed by the old-fashioned Chinese doctors I was betraying all that had been taught me. If they were not willing to let me do what I knew to be right to relieve my patient, or send for a doctor of Western medicine, I could not stay. To stay would mean that I was being a party to the gross negligence which I feel is being allowed here, for this poor woman will surely die. The family begged me to stay, and I agreed to stay a little longer. In the meantime the patient still calls for the foreign doctor. Poor folks—they feel they are doing the best they can do.

Two days later. How relieved I am! The family called in an American doctor today; also two Chinese doctors trained in Western medicine. Not only did these doctors agree as to diagnosis but they also had a consultation and prescribed the same medicine. At last I may bathe the patient, give her water and enemas. Now, we shall see if the temperature will not come down. I hope the family has not waited too long before taking this step.

Six days later. At last my patient is better and her fever is lower. The family have been very much surprised at her rapid improvement and give the doctors much credit. There is every reason to believe that she will recover. They have had a real demonstration of the effectiveness of Western medicine in comparison with the old Chinese medical practice. The patient agrees with me in telling them it is Christian medicine that has cured her. She says she is the only Christian in the family. Perhaps more of

them will be willing to listen to the Christian message because of this experience. I have promised to stay one more week until the patient is able to be up. If only all of my cases would end as happily as this one!

Dr. Walter Judd of China, who went through dangerous times when he remained at an island station, the sole foreigner in a region that was overrun by bandits and communist forces, tells of the splendid way one of these young Chinese nurses took care of him when he was sick with a vicious form of malaria:

I got sick in October with my forty-fourth attack of malignant malaria. It was the worst. I got to the place where I couldn't develop adequate resistance to it. I had taken quinine daily for years, but this time the quinine was like water—and sort of weak water at that! It didn't hit it. This attack came on when I was especially busy and tired. I ran out of the good quinine we had been using. There was another supply of quinine that I thought was all right, but it proved to be not all right, and the malaria got a head start on me.

The second morning, after a night of delirium, I was clear mentally and gave some instructions to the Chinese nurse, a graduate of the Methodist Hospital in Peking, the finest nurse I have ever worked with. I know now how people feel when they think it is all over. I have read about men caught out in a snowstorm, freezing to death, when they want to lie down and die. It is just so hard to make yourself try to live. You are so miserable and lonely and far away, if you could just die and have the pain over with, what a relief! Yet something in your training won't let you give up. That little girl came to my bed, and the tears were pouring down her face. She knew what we were up against. She had seen plenty of people die of malignant malaria. Many times children come down in

the afternoon at four o'clock, and the next afternoon at four o'clock, unless treated vigorously, they are dead. I had more resistance than that, however, because I had had many previous attacks.

I told her that her uncle who runs a medicine shop had previously been given some of our good quinine. She was to go there and see if she could get enough to last eight or nine days. If she could get enough, then she was to send a telegram, which I dictated and she wrote down, to the folks in Foochow, telling them that somehow or other they must persuade the postal commissioner there to allow some quinine to be sent up by the carriers of first-class mail (the parcel post service had been suspended for months). If she couldn't get locally enough to last the eight or nine days till more could come, there was no use in sending the telegram. It would be too late. Then I tried to tell her what she should do for me, because I knew that by noon my fever would be up and I would be delirious again. She went out to get the quinine. That is the last I remember for four days. But she got it and she kept her head. For eleven days I wasn't able to take a thing down by mouth, and she had to give me food and nourishment by other means.

Along about the eighth of November, I came around and began to eat a little. On the twelfth, in was brought a Catholic priest, a Swiss, who lived in a neighboring district and who had been ill for three or four weeks. There we were, two sick foreigners, and twelve days' journey from the nearest doctor! I had to get up and do the best I could for him. . . . He was so far gone I was sure he couldn't get well. I was carried to his bedside that day and the next in a sedan chair, but the following morning I couldn't go any more. He went out the third day, and I came pretty near going with him. That little nurse never wavered.

Chapter Nine

TEST TUBES AND GERMS

FINDING out more about disease is a very important part of scientific medicine. Doctors are all the time studying different diseases in their laboratories and from their patients, and trying new methods of preventing and treating them. Such work is called medical research. This is the way we have found out about vaccination against smallpox and about antitoxin for diphtheria. We hope some day that we shall learn how to prevent infantile paralysis and influenza. There is still much to be discovered about many diseases.

In the parts of the world where medical missionaries are at work—Africa, China and Arabia, for example—there are still many diseases the doctors do not fully understand. The doctors know a great deal about some of the diseases—like leprosy and hookworm and dysentery. But they need to know much more, because there are still hundreds of thousands, and even millions of people who are suffering and dying every year from fevers, blood infections and other diseases caused by queer germs of different kinds. Any doctor—or for that matter anybody who

cares about fellow human beings—should be interested in these experiments and studies.

An important point to remember about medical research is that it is teamwork of a splendid sort carried on throughout the world. Nobody works alone. Each man builds on what someone else has done. We say that So-and-so has made a great discovery. In reality what has happened is like what happens when a new country is discovered. One man goes so far and comes back and writes about it. Another man goes a little further, and perhaps, as a result of what he finds out, advises later explorers to spend no time in certain regions, as they seem likely to yield information of no value. Someone starts out intending to go further than any of the others has gone, but he is never heard from. Still another gets a fine view of the new country from a mountaintop, and he is therefore able to give a lot of help to the next ones. Then finally there comes one who pushes still farther ahead, using the information gathered by all, and it is he who actually makes the discovery. Our geographies are full of the names of these discoverers and explorers. The credit should really be shared with all the explorers, which is what is usually done in medical discovery. And medicine, too, has its diseases and methods of treatment named after their discoverers. Doctors writing of their experiments in medical journals and books are constantly quoting other doctors. And that is the way truth is gathered and built up.

Medical missionaries are tremendously interested

in research, but they are usually so busy with patients and have so little money and time for experiments, and so little in the way of laboratory equipment, that they are not able to achieve a great deal in the way of discovery. Still, I want to give you some examples of research they have carried out and discoveries they have made.

In Severance Union Medical College in Korea, of which Dr. Avison is the head, there is a regular research department, with a director and a committee in charge of it. During one year twenty articles along research lines were published by Severance men in scientific journals. This means that a lot of quiet investigation is going on which is being built into the general knowledge of the medical world. These particular articles and their authors may be forgotten, but from one of them there may come an idea which will help to bring about a great discovery. Some of the first successful investigations of the drug called ephedrine, which is so useful now for nose and throat and sinus trouble, were conducted at the Severance Medical School in Korea.

You may never have heard of Dr. Hermann Barlow of China. But among people who are familiar with research in tropical diseases, he is well known. And he is well known because of what he did in research work on a disease with a name a yard long. It is caused by a parasite called the fluke, and which presents a very serious problem in China and some other parts

of Asia. It develops slowly and steadily. Persons who have it get steadily worse and worse and finally they die.

For years the doctors had seen people with this disease—thousands of people were dying of it all the time. Many of them came to the hospitals, but nothing much could be done for them because the doctors did not understand the cause or the treatment. Many thousands more never came to the hospitals at all. Meanwhile, research workers had been noticing certain peculiar points about this disease of the long name. For one thing, it wasn't present in all parts of China, and there were certain areas in which it was especially bad. Why was that? They began to suspect a mean little worm called a fluke. They studied this worm in their laboratories, trailed it around and saw where it lived and what it did.

Dr. Barlow was one of those who got much excited about this fluke. There was a great deal of the disease in his region, where Chinese all around him were wasting away and dying from it. He felt that he had to do something strenuous to find out more about it. So he conducted a most unusual experiment. It was on himself. He actually swallowed a number of the repulsive worms so that he could study at first hand just what happened—that is, what happened in himself. He was taking a big chance, of course, for he knew perfectly well that he might die with the disease. But he believed the game was worth the candle. He didn't do this on a hit-or-miss principle. He had

a carefully worked out plan to go to Johns Hopkins University in Baltimore, where there were the best of laboratories and where there were experts to study his case. He came as a patient, and they studied his case long and hard and learned a good deal.

Then, when he went back to China, there was still more to be found out about this fluke which was such a bad actor. His board of missions gave him a year free from regular hospital duties so that he could do research work. The Rockefeller Foundation, through its China Medical Board, provided him with funds and equipment.

It was a sort of Sherlock Holmes job, trailing the wriggling villain in the piece—the fluke. Step by step the detective work went on, bringing clues and convictions. One culprit, though he proved to be really an innocent one, was a certain small snail. The fluke, it turned out, got into this snail and lived there during one stage of growth. This particular kind of snail, incidentally, lives only in certain parts of China—which you see, goes to show why the disease is not found everywhere. Next it was found that two kinds of nuts were guilty, as the fluke was in the habit of snuggling up inside of them. The Chinese are very fond of eating these nuts, which meant that they were unsuspectingly taking the flukes into their systems in this way.

So it goes in research. When you have studied in your laboratory all the habits and habitations of a

germ or a parasite worm you are on the way to disposing of it and protecting people against it. Dr. Barlow made important discoveries in the conquest of a fatal disease. His work was a mountain peak from which to take a first view into unexplored territory. Dr. Barlow once said, "This is my favorite passage of scripture: 'My Father worketh hitherto, and I work.' No heaven for me with a harp and a crown. I want a heaven with blue-prints in it—something more to do."

Another devastating disease found in China as well as in other parts of the East is kala-azar. It is fatal more times than not, if allowed to run its course. Not much research had been done on kala-azar when Dr. Samuel Cochran of Hwai Yuan, China, took up the study and made important discoveries about it.

Back in 1908, while he was studying during a furlough at the School of Tropical Medicine in London, Dr. Cochran realized that in Hwai Yuan they were living in what is called an endemic area of kala-azar —in other words, in an area where it is present all the time instead of appearing just now and then in what we familiarly call epidemic form. After learning in London about the various methods employed in the search for the germs of the disease, he returned to China and began trying some different methods. His various attempts to find it in the blood came to nothing. Then he cut out a small lymph node from the body of a patient suffering from kala-azar and found it swarm-

ing with the germs. When he reported this to the School of Tropical Medicine in London they were so much interested that they gave him money to carry on further investigations. He sent out a questionnaire to practically all the hospitals all over China for information on kala-azar. From these replies he drew up a kala-azar map, showing the areas where the disease was common. This was very important information.

Dr. Cochran's work so interested many doctors in China that they studied the disease harder than ever. Prior to this time it had not been generally known just what germ carried the disease, though actually a few persons had found the germ before Dr. Cochran did. For some time no satisfactory treatment for kala-azar was discovered; then, fortunately, antimony was tried and proved successful. Now, if a case is not too far along before treatment is begun, it can usually be cured with antimony.

When I was at Hwai Yuan, visiting Dr. Cochran's old hospital, I found that Dr. Theodore Yates, Dr. Cochran's successor, treats hundreds of sufferers from kala-azar every year. Sometimes more than half his hospital patients have this trouble. The people in that part of China have learned that this miserable disease can be cured at the hospital, and they have learned to go there when they think they have it. Dr. Cochran's work was one of the links in the chain of research that has conquered this disease. He did his

work not in an expensive, beautifully equipped institution, but in a simple and small mission hospital.

An unusual tribute was paid to another contribution to research made at a missionary institution in China, when in 1932 a distinguished group of men from leading medical and social organizations gathered at dinner in a great New York hotel to honor Dr. Gordon Agnew of Canada, whose investigations on the causes of tooth decay had attracted the attention of the scientific world. There were assembled representatives of the International Health Board, the International Dental Foundation for Children, the Columbia University College of Dentistry, the Metropolitan Life Insurance Company, the New York Academy of Medicine, the United States Public Health Service, the League of Nations Association and several other organizations interested in human welfare.

Perhaps you have not thought of research work in the field of dental work as of particular consequence. It has never been fully recognized. There is a special need for it in a country like China, where anything like care of the teeth is almost unknown. But Dr. Agnew's studies had a far wider value than just for China.

When he first went out there some years ago, to join the dental department of the medical school in West China Union University at Chengtu, he became especially interested in the problem of tooth decay

and its prevention. With the able help of his wife, he set to work on scientific laboratory experiments in nutrition and on careful observations of large numbers of Chinese. He noticed, for example, that such hard-working people as chair-carriers had a very restricted, simple diet but kept in good condition and had sound teeth. They worked through a large part of the year with light clothing and plenty of exposure to the sun. Dr. Agnew and his wife also noticed that certain aboriginal tribes, up toward Tibet, although living on a very limited diet had healthy teeth. The doctor and his wife analyzed that diet carefully. They also noticed that well-to-do Chinese, who wore more clothing and lived much indoors, had decidedly more trouble with their teeth than the poorer people who lived mostly outdoors. When the Agnews came home to Toronto on furlough they carried out an intricate and exhaustive study on about fifteen hundred rats. Rats are valuable animals for laboratory research. The Agnew study involved feeding different diets to different sets of rats, and then studying the effects on their teeth and bones. Finally observations on the diet of some three hundred and fifty school children were carried out in and around Toronto.

Well, all these studies are not yet complete. But they have gone far enough to yield valuable new information regarding particular elements in human diet as they affect the development and preservation of teeth. This field of dental studies is not, of course, a new one. Dr. Agnew pays tribute to the earlier work

of other investigators, but the testimony of the doctors at the dinner to Dr. Agnew was that his discoveries were remarkable. The future health of many of us here in the United States and Canada may owe something to the skilful scientific research that Dr. and Mrs. Agnew carried on in a mission college in a remote part of China.

These are just a few illustrations of the research achievements of medical missionaries. More could be cited. But there still remains a great challenge to young men and women doctors to take up this search for the hidden causes of disease. This indeed is Christlike work.

Even in an isolated and rough-and-ready sort of hospital like Dr. Albert Schweitzer's in Africa, there is some research going on. German doctors have always been keen scientists and investigators. Dr. Trensz, one of Dr. Schweitzer's associates, is evidently such a doctor. He believes that he has found the germ that causes a kind of dysentery, which is one of the serious diseases of that region, and which many of Dr. Schweitzer's patients have. If this proves to be true, it may make a marked difference in the treatment of the disease. Things like this are likely to happen at any time. I mention it here as an illustration of what is taking place right now, even before it is assured that a real discovery has been made.

We have been looking at the contributions that have been made to medical research by mission hos-

pitals and doctors in various parts of the world. Let us now look at the work of some of the allies that the Christian doctors have in their struggle for the health of the people they serve. Without the constant co-operation of such agencies as the great medical research foundations and the public health services of governments, the missions would not be able to achieve the results they have so far obtained.

One such an ally in China is the hospital of the Rockefeller Foundation in Peiping. This hospital has carried on and is carrying on invaluable research work on many different diseases. Part of the important work on the drug ephedrine which is used so effectively now in America, was done there. The Rockefeller Foundation also carries on splendid research work in other parts of the world including Africa.

In Calcutta there is another great ally in the School of Tropical Medicine, where research is done on the diseases prevalent in India. One of the leading men at this Calcutta school, a world authority on leprosy, is Dr. Ernest Muir. Dr. Muir was a medical missionary in India when he began his studies on leprosy. With the excellent facilities of the Calcutta school, he is now able to carry forward these studies on leprosy which mean so much to hundreds of thousands of sufferers.

More and more the governments of countries like China and Siam, which used to be called backward, are realizing the importance of scientific medicine

and are carrying on research in many places, and the results are being put at the disposal of all doctors. Japan, whose progress in medicine has been so rapid, has made many valuable research contributions.

In Africa, under the governments of the various colonies and mandates, a great deal is being done to study disease and furnish medical aid for the people. For example, the French government in the Cameroun has an active health department. Campaigns are carried on against certain of the worst diseases, one of which is sleeping sickness. This terrible disease, which is peculiar to Africa, is carried by the tse-tse fly. Until the new treatment was discovered by the Rockefeller Foundation, the disease was considered fatal. The person who caught it became steadily more and more sleepy and weak until, paralyzed, he died. Now it can be cured if treated early enough. Mission doctors and government doctors have cooperated in this work. They have been so successful in one particular area, according to a medical missionary, that the number of persons suffering from the disease has been reduced from fifty-six per cent of the population to less than ten per cent. The work will probably go on until the disease is entirely done away with—until there are no more cases left to spread the infection.

When I was in Nanking, China, I was one of a party that called on Dr. Lew, the head of the health department of the Chinese government. He is a graduate of Harvard Medical School and a very able man. He discussed with us some of his plans for medical

education in China, where there is such a tremendous need for scientifically trained doctors. Then we went out to the model government hospital of which Dr. Lew is the head. Though it was then in temporary quarters, while a fine new hospital was being built, it was a very attractive and efficient sort of place. It has excellent x-ray and other modern equipment, well-trained doctors and nurses and neat wards. Altogether it has an air of being an excellent hospital.

Almost the first gathering I attended in Persia during my visit of 1931 was a lecture by an army officer. It was on the subject of exercise, and was one of a series of health lectures. The fairly large lecture room was filled mostly by young men. The lecturer was alert and vigorous, and he spoke fluently and enthusiastically. The audience paid close attention. Ten years before, when I had been living in Persia, lectures of this kind were practically non-existent. Now the government encourages and carries out many programs of this kind.

When I was in Bangkok in Siam, Dr. Neils Nedergaard, a medical missionary, took me to see two of the three splendid hospitals of that great city, the capital of the country. One of these was the Red Cross hospital, the other the university hospital, with which the government medical college is connected. Both are fine modern institutions. The medical college has been helped financially by the Rockefeller Foundation and has had Americans on its staff. But today nearly all the faculty are Siamese, and all have been

trained in modern methods. Research is, of course, a part of their program.

The government of India has likewise done a great deal along medical lines. It provides vaccines and serums, as was shown in the account of Dr. Robert Goheen's fight with plague at Vengurla. It maintains a large number of free dispensaries. It pays a staff of doctors to take care of people in these dispensaries and in a certain number of hospitals. The government has established several medical colleges in the larger cities. It strives to improve the sanitation of the country and to raise the standards of public health.

The American government has done effective medical work in the Philippines. When the islands were taken over after the Spanish-American War, health conditions there were very bad. Smallpox, for example, was rampant. Now, through vaccination and other means, smallpox has been almost stamped out. Leprosy was widespread; and nothing effective was being done about it. Now a leprosy hospital and colony with several thousand patients has been established at Culion. Culion is the most important project of the Leonard Wood Memorial fund for fighting leprosy in the Philippines. It is hoped that through research and treatment and isolation this terrible scourge of the Orient will be driven from the Philippines. Hygiene and sanitation are universally taught in government and mission schools in the Philippines. The results show. It seemed to me on my trip around the world that the Philippine stu-

dents were a particularly alert, happy, healthy lot of boys and girls.

In the Philippines, as in Siam, there is special effort to cooperate between the government and the missions. The missions do not undertake medical work in places where the government medical work is adequate, and the government follows the same policy in places already served by missions.

People sometimes ask whether many of the countries served by Christian missions are not now doing so much for themselves that medical missionaries are no longer necessary. On this question there are at least two things to be said:

For all their progress countries like China, India, Africa, Persia and Arabia are still a long way from having enough doctors or nurses or hospitals to take care of their people, especially their poor people. Moreover, we who have seen and known this work believe that medical missions exert a unique influence for Christian character building.

Chapter Ten

WORKING WITH THE GOOD PHYSICIAN

IF MEDICAL missions are relieving suffering, that is something. Indeed, it is a great deal, for they are keeping people from dying. But is that all they are trying to do? Is there not some greater purpose that they hope to accomplish?

Suppose Dr. Harrison relieves an Arab of a long siege of suffering, and that man goes back to his desert life, having got rid of a bodily misery but not having been affected otherwise. Is the missionary satisfied? Suppose Dr. Agnes Fraser of Africa saves a little boy's life, and the boy's family go right on feeling and thinking and acting just as they did before, without anything new having come into their lives. Has the missionary accomplished all that is to be desired?

We like to think about the friendship shown by those boatmen on the river for Dr. Harrison after they had been with him a while. We like to think of how that hard, gruff, Bedouin from the desert changed while he was in the hospital, even though he began by cursing Dr. Harrison.

That picture of hundreds of fierce Pathan people filing past Dr. Pennell's body remains in our minds

because we realize that something in his life and example had changed something in theirs.

I remember reading a novel by H. G. Wells some time ago. One of the characters was a man who didn't have to work for a living and who spent all his time in healthy outdoor sports. He would play tennis and ride for a while, then go for a swim or go on a hike. After that he would box or play another game. He was always talking about how fine all this was for keeping himself fit. He spent all his time just keeping in perfect physical condition. One day somebody gave him a hard jolt by asking, "Keeping fit for what?"

When we think of the work of Christian doctors and nurses such as has been described in this book, the question comes up: Does something happen in the lives of the persons whom they help? The greatest of physicians, Jesus, said that he came to give people life, abundant life. The doctors and nurses who go out in his name and serve in his spirit are trying to do something toward bringing this abundant life to all whom they can reach.

Even during the terrible war conditions of China these quiet influences are at work. Sometimes it is the results of these very war conditions that change a life, as was the case with one young Chinese. He was a simple country lad who was pressed into the ranks, dressed in a strange uniform and hurried away to the front. The older soldiers tried to tell him about bat-

tles and campaigns. He hated it all, and longed to go home. Then he suddenly found himself in battle, facing heavy rifle and machine gun fire, boys and men falling all around him, stumbling along toward whatever they were supposed to be attacking. It was all very wild and horrible and deafening and blinding. And then—everything went black and silent. He had fallen too. Hours passed. When at length he wearily opened his eyes he didn't recognize his surroundings at all. Where was he? In place of that bloody, reeking bedlam of the battlefield, he was in a clean white bed in a long quiet room with two rows of white beds. He didn't know yet that it was a hospital—a foreign hospital at that—run by the "foreign devils," as the Chinese used to call all foreigners. Slowly and painfully he looked about him. Other boys and men were in the other beds—some of them groaning—some very still —others apparently feeling better. And then, as the missionary who was present, says:

A door opened and there stood a foreign devil! But could he be bad? He had such a happy smile. "Surely his heart must be good," said our lad to himself. And following the foreign devil was a young woman of his own people, and how kind were her eyes, too! Both came to his bedside. In his own tongue they questioned him gently and as gently dressed his wounds. The man went on to the other beds and the young woman told him that the foreigner was a great doctor and that she was a nurse and that they would try to make him well. "But I have no money," said the boy, "I cannot pay you." "We want no money," she said, "we do it for the love of Jesus."

Days passed, but our lad had much to think of as the pain grew less. He watched the great doctor go from bed to bed, so tender in his touch, giving courage with his ready smile. A second time he questioned his nurse—"Tell me again, my head is so stupid, why is he so good to us poor chaps?" and again she answered, "It is for the love of Jesus." "But the doctor is a foreigner," said the boy. "There are no foreigners in the love of Jesus," said the nurse. "All the dressings on your wounds are made by foreigners across the sea, all for the love of Jesus." "I never knew such love," he answered.

Little by little, as she changed his dressings, day by day, she told him stories of the loving Jesus. She gave him a little book that held these stories. "There is a boy at home who can read," said our lad, "he will read them to me." And so when he went to his home in the sunny fields, he carried a new purpose—"We will tell in our village these wonderful stories of a Friend who loves them all."

One of the striking stories told me in my travel around the world was in India, at Fatehgarh, where there is a hospital for men and women, directed by a woman, Dr. Adelaide Woodard. The fact, by the way, that men come to her hospital is extraordinary in an Oriental country where women have always been so looked down upon. I can testify that the hospital is a busy place from morning till night.

It seems that near Fatehgarh—just across the river from it—there is a certain village whose headman used to be very hostile to the hospital and to the rest of the Christian activities. He seemed possessed with the idea of doing everything he could against the mis-

sionary workers—talking against them, interfering, breaking up meetings, and in general making a lot of trouble. Then a strange thing happened. Dr. Woodard was called to the hospital door one day, and to her utter surprise found this bitterly hostile man and his small boy who was evidently very sick. The father humbly laid the boy at her feet.

"I have been to all our doctors and they can do nothing. And now I come to you to save his life."

Dr. Woodard's examination showed a critical condition—peritonitis—probably from appendicitis. The only hope lay in an immediate operation, but there wasn't any great hope at that. She told the father frankly just how it stood. She was ready to operate and do her utmost if he wished. But he had come late, and she could not promise anything. Without an operation the boy would surely die. The father himself could see that.

With tears in his eyes, he simply said, "He is yours."

Dr. Woodard operated. It was a close call, but the boy pulled through. The father was overjoyed. His gratitude was overwhelming. Nothing was too good for Dr. Woodard and her associates after that. When they took the boy away, the grateful family was singing the praises of the hospital to which they had been antagonistic. The father now does everything to open doors where he used to close them; he praises where he used to curse. As a village head man, or sort of mayor, instead of obstructing, he now gives the influence he formerly withheld. Here we have the

case of a man whose spirit was entirely changed by Christian love in action.

In Dr. Goheen's leper hospital I saw among the patients a quiet little man whose courageous spirit touched me so deeply that I shall always remember him. He had come to the hospital too late to be helped very much. His fingers are mostly gone and he often gets sick. A good many people in his condition would just give up, but not he.

The Sunday I was there we had morning service on the open porch of the clinic building. The Indian people love music, and these leprosy patients had their simple little band, a drum and two or three other pieces. When it came time to begin, the drummer wasn't there. Then I saw this man slip quietly over to the drum, pick up the drumsticks somehow in his stumps of hands, and fall right in with the music. When the regular drummer came he quietly surrendered the drumsticks. Dr. Goheen whispered to me that that was the sort of helpful little thing he was always doing. It wasn't much, to be sure. But it was true to form. It showed his thoughtful, ready spirit. This man whose life seemed so forlorn and hopeless had found something that gave him a spirit strong enough to rise above his suffering. He was down but not out. When I think of him I don't remember his poor remnants of hands and feet and his sick-looking face, but I think of something fine and radiant about him, which has helped me.

At that same hospital for lepers is a lovely, motherly

woman, who was a cured case some years ago. She could have gone away. After living with sad and tragic-looking people most of us would have liked to get away. But, because she had come to feel at home there, and to love the people, and had found how to be of service, she stayed on. She is mother and sister to all the women patients, and a beautiful influence in the whole place. To say that she had been cured of leprosy in that hospital would only be the beginning of the story of what had happened to her there.

When I was in Hwai Yuen, China, some years ago, I went up on the mountain above the mission hospital. There is a magnificent view from there of the plains and of the two rivers that come together at the city. Up on this picturesque height is an old Chinese shrine, which used to be a very sacred place. As we looked out over the scene they told me a tale that had to do with another shrine and with Dr. Samuel Cochran, who had been the doctor at the hospital.

Dr. Cochran began his work in Hwai Yuen over thirty years ago, when the Chinese there had not learned very much about foreigners and always called them "foreign devils." But the friendliness of the hospital and Dr. Cochran's skill and spirit soon made a new impression.

One day he fell desperately sick with typhus fever. Word went out in Hwai Yuen that the foreign doctor, their good friend, was critically ill. What do you suppose happened? A number of the substantial citizens of the town got together and went to the temple of

the city god to make petitions for his life. Theirs were no ordinary prayers. Solemnly before their god they said, "Shorten each one of our lives by a year, and let Dr. Cochran's life be spared." That voluntary contribution of a year of life may sound fantastic to you and me, but to them it was a serious matter. They were prompted to sacrifice for their friend who had spent his life sacrificing for them and their people. Fortunately Dr. Cochran got well, and put in many more years of usefulness in China.

Of course, there are great numbers of people—thousands of them—who come and go through mission hospitals—and seem not to be influenced in any way. They may not be changed at all. We have to expect that. But we never know what thoughts they may be thinking, and what different attitudes they may take in the future, and what they will say when Christianity and Christians are discussed by their kinsmen and companions back in their villages.

When something happens in a life at a Christian hospital, there is no telling how many more people will be influenced by that life. Here is an instance from Africa. Bekali Mendom was one of the first of his tribe to become a Christian. A missionary speaks of his "ugly, tender, beautiful, never-to-be-forgotten face." Someone else writes: "His zeal for the work and for winning men to Christ was like a flame. After an operation, he was placed in the midst of the most hardened characters in the hospital. While he was re-

covering, he led nearly every man about his bed to Christ."

You wouldn't expect one of the fierce Boxers of China, who back in 1900 was killing foreigners, to be so touched by the way certain Christians met their death during the Boxer trouble, that years later he became a Christian himself. But this very thing happened. A coarse, hateful, murderous man became a great Christian leader, because he had been impressed by the spirit in which those martyrs had died.

Dr. Walter Judd, who had such critical experiences in China a few years ago, tells of one of these incidents, when the interior town in which his hospital was located fell into the hands of bandits.

I was under surveillance in a sort of polite captivity for several months last year, in the hands of the most cruel, vicious man I ever saw. Every country has good men and women, and every country has bad men and women. This bandit chief, Lu Hsin Ming, was a terrible man. He was ignorant and uneducated, to be sure; but believe me, a man who can hold out as the head of a band of eight or nine hundred bandits has force of character. The survival of the fittest is a real struggle. He captured our city in 1930 when the government troops were withdrawn to put down a major revolt in the North. As long as he was in the city and allowed to get the taxes legally, he would rather do it legally—or with the pretense of legality—and with orderliness. As long as I attended to my business and took care of his sick men and didn't make any effort to escape, they interfered very little with my usual routine.

Fortunately, for me, he got a bad conjunctivitis and

took Chinese medicine and got worse. He came to me, and I was able to clear it up quickly, so it put him to a certain degree under obligation to me. That went along through August and September and October. The fighting in the North finished in October, and the government started to send good troops back down to the South. We knew we were headed for trouble.

In October I had my forty-fourth attack of malignant malaria. . . . I picked up strength and along about the first of December got around a little bit. . . . Then word came that Nanking troops, the 56th Nationalist Army, were being sent down to take over the district, and this bandit group would be driven out. The last of December was hard going. Everybody knew what would happen. They would take me and hold me for ransom, because they needed a doctor and needed money. . . .

On the afternoon before New Year's Day at about one o'clock came a secretary from the bandit headquarters. He was a very good friend of mine but he had no influence. He said, "Doctor, they are going to leave tonight. The new troops are twenty miles away, and we are going to move out. They are going to take you. I heard them talking about it. And they are going to take women, take people for ransom, and loot the city tonight." I knew what would happen to me in two days of exposure in the middle of the winter, in that weakened physical condition. But at seven o'clock that evening Lu Hsin Ming himself came into my dispensary, sat down, and, without preliminaries, said, "Dr. Judd, we are leaving tonight. I was going to take you along, as you know. I am not going to do it now. You have been fair with us and have taken care of us in the hospital here, and I know you are not getting any money out of it. I don't see why you do it. You have been sick yourself. If you had to live the way we all have to live, up on the hills in the middle of win-

ter, you wouldn't live long. I know it. Hence I am not going to take you. How much do we owe the hospital?"

He paid the hospital $170 and went out. In the middle of the night, at two o'clock when the shops were all closed, so that his men couldn't loot and he could control them better, he left. He took not a man or woman captive. . . . He could not do what he had planned. Something had happened to Lu Hsin Ming. He could not do it. If God can change the heart of such a man, he can change anybody. The way of love works.

After all that has been said about the healing work of Christian doctors and missions; after we have followed the pioneer across deserts, through forests and over mountains; after we have watched the life-giving work of the hospitals; after we have seen the toiling search for the deadly germ, and then the application of this knowledge to prevent suffering and tragedy; after we have met the fine young men and women who are developing into responsible workers for their own lands; after all this, we can imagine no higher tribute to the work of Christian doctors and nurses than that of a simple Korean woman patient who said:

"If the Jesus doctrine makes folks treat others as you have treated me, I want to follow the Jesus way."